# The Cavendish Lecture

ON

# HYSTERIA AND ITS COUNTERFEIT PRESENTMENTS.

*Delivered before the West London Medico-Chirurgical Society, on Friday, June 5th, 1885,*

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MR. PRESIDENT AND GENTLEMEN,—It has often happened to me, when I have determined to speak or write on some special subject with which I had thought I was familiar, that, as I have pondered upon it with the object of bringing my facts and fancies into due mutual relation so that I might place them in the form of a compact and intelligible picture before my auditors or my readers, I have found my task grow more and more difficult with thinking upon it; I have found matters which I had perhaps hastily clothed with importance dwindle into insignificance; I have found what had seemed incidental and subsidiary questions assuming fundamental importance and pressing for solution; and I have discovered that, if I wanted to deal with my subject intelligently and adequately, I should have to bestow much more contemplation upon it than I had originally intended, and to treat it on different principles from those which suggested themselves to my mind in the first instance.

So it proved on the present occasion. It would be an easy matter, I thought, when I decided on the title of my lecture, to collect out of my experience a series of cases of hysteria and a parallel series which were not hysterical, to compare them, and to consider the lessons which such a comparison might teach. But as I proceeded with my self-imposed task, and began to bring into mental juxtaposition cases which I had regarded as hysterical and cases which I had regarded as not hysterical, I was compelled to ask myself more definitely than I had ever done before what were my grounds for applying the epithet "hysterical" to certain cases and for withholding it from certain other cases. I pondered over the matter; I puzzled myself; I came to conclusions that did not satisfy me; and at length, having wasted much time over it, I decided, after all, to treat my subject from the superficial point of view from which I had at first regarded it, and to reserve what little I had to say upon its more abstruse aspects for the close of my lecture.

I shall not attempt, then, at the present moment to define hysteria, or to consider in what respects hysterical disorders of the nervous system differ from other functional nervous derangements, or how they may be distinguished clinically from these and other groups of symptoms due to structural disease of the nervous centres, or of the nerves. But I shall assume, as is generally admitted, that hysteria represents an unstable condition of the nervous functions, arising independently of organic changes in the nervous system; in which at one time or another one or other part, or several parts, of the nervous organism may be temporarily affected in various ways; but in regard to which, partly from the conditions under which the symptoms of the disease arise, partly from the emotional state which is generally present, and partly from peculiarities in the symptoms themselves, in their mutual relations and in their course, there is, as a general rule, little difficulty in diagnosis. And I proceed to describe a selection of cases which, on the grounds above-stated, I have reasons to regard as hysterical, and to compare them generally, or in some of their most striking symptoms, with cases which, so far as I know, would not generally be placed in that category.

1. Mary D——, an emotional girl, nineteen years of age, was under my care for two or three months in the latter part of 1882. She was suffering from hysterical aphonia; besides which she presented a slight external squint of the left eye, and a narrowing of the left palpebral fissure and of the left side of the mouth, associated with a little twitching in the facial muscles of the same side. The aphonia was of recent origin, but no history could be obtained with regard to the affection of the face and eye. No material improvement took place. She came under my care a second time towards the end of 1883. She was still aphonic, and still presented her old facial peculiarities, but she was suffering from vomiting and emaciation, and from hysterical fits attended with much violence of convulsions. She was subjected to the Weir-Mitchell method of treatment, and at the end of three months left the hospital much improved, excepting in the symptoms for which she was originally admitted. On November 21st, 1884, she became my patient for the third time. She had remained aphonic, but suddenly, some three weeks before admission, had lost the power of articulation as well. She was still a very emotional young lady, with slight external squint of the left eye, a little narrowing of the left palpebral fissure (which Mr. Nettleship considered to be due to partial ptosis), some narrowing of the left side of the mouth associated with constant twitching of the angle, and a fidgety manner. She could not phonate, excepting a little when she laughed or coughed, neither could she articulate; indeed, when asked to speak, she merely moved her lips vaguely, as though not comprehending how to adapt them to the utterance of articulate language, but there was no paralysis of the larynx or of the mouth or tongue. Dr. Semon found that the vocal cords moved with the utmost freedom, that they often came into close juxtaposition, and that sometimes when apparently efforts were being made to phonate the rima glottidis became obliterated. The lips and tongue and soft palate, for all purposes but speech, were completely under her control. But though she could not speak, she understood what was said, and she could answer readily in writing. In addition to the above symptoms, it was discovered that she had anæsthesia throughout the left side (head, neck, arm, trunk, and leg), that she could neither taste nor feel with the left side of the tongue, that she could not smell with the left nostril, and that the perception of colours with the left eye was imperfect. There was complete absence of sensation and of reflex excitability in the soft palate and pharynx. The left ovarian region was tender. No very marked change occurred for some time. There was a little variation in the degree and distribution of the hemianæsthesia; and on one occasion, under the influence of a powerful magnet, there was temporary partial transference. I showed her and taught her how by smacking her lips, by similar action of her tongue, and by breathing through her upper row of teeth when resting on her lower lip, she could utter the essential consonantal sounds of *p*, *t*, and *f* respectively, but she made no further advance towards speech. She suffered much and constantly from headache, and occasionally from sickness; and early in January had a severe hysterical fit, in which she was violently convulsed and very rigid, but remained sensible. It ended in a fit of crying. After this she complained very much of headache and sickness, seemed ill, and ultimately took to her bed. She appeared still to be suffering thus when suddenly, late in the evening of March 10th, she called out "Sister," and at once the floodgates of her speech were opened, and she talked so volubly and incessantly that she had to be removed to a small ward for the night. From this time she improved rapidly, in nearly all respects. Her headache and vomiting gradually ceased. She became bright and cheerful, and useful in the ward, and looked and conducted herself like a sensible girl. But the paralytic phenomena on the left side of the face remained unchanged; and she was still anæsthetic, void of taste and smell, and partially colour-blind when, early in April, she was sent to a convalescent hospital.

Unfortunately, the history of the case does not end here; for, three or four weeks afterwards, she was brought back to the hospital with recurrence of aphonia and aphemia and, additionally, with somewhat severe general chorea. It will be recollected that on former occasions her manner had been fidgety, but her movements were not then characteristic, they were rather sudden and impulsive. But now they were typically choreic, and involved not merely the limbs, but the trunk, the head and neck, the face, the eyes, and the tongue. It was stated that the return of symptoms was due to her having been suddenly roused from sleep by one of her fellow-convalescents. She had never, so far as I know, had chorea previously; she had never had rheumatism; and no evidence of cardiac disease was ever detected. Within the last few weeks she has again suddenly regained speech and voice; but she is still under treatment for the chorea, which is improving, and for the anæsthesia and paralysis.

Now, that the above is essentially a case of hysteria will

be generally allowed. The emotional character of the girl; the aphonia corresponding accurately with the aphonia, so often observed in hysteria; the hemianæsthesia, with involvement of the senses of smell, taste, and sight on the same side; the ovarian tenderness; the characteristic fits; and the rapid and unexpected variations in the symptoms—all furnish evidence of the correctness of that view. But was the aphemia also hysterical? Is the chorea hysterical? Are the persistent paralytic or spasmodic phenomena on the left side of the face hysterical?

That the aphemia was functional, and presumably therefore hysterical, cannot, I think, be doubted. The history of the case shows it. But aphemia is rare as an item of hysteria. At any rate, I have only once before met with it in a definite form; while aphonia is common. And yet when one considers the nature of the nervous disturbances by which aphonia and aphemia are respectively caused, and the close functional relationship there is between these two factors of speech, it seems odd that aphemia should not be a more common outcome of hysteria, and more often associated with hysterical aphonia than it is. It has been shown in this case, as I believe it has been shown in many other such cases, that there was no paralysis of the vocal cords, which could be brought into the most complete apposition, and into the position therefore in which phonation could not have been helped had the patient managed to breathe forcibly at the suitable moment. The defect was a hinderance to the proper transmission of the mental impulses to phonate to the ministerial centre by means of which the complex group of actions which subserve phonation are automatically coördinated, or a failure of this centre to act, or an impediment to the passage of the duly coördinated impulses along its efferent nerves. It has been shown also that there was no real paralysis of the organs of articulation. She understood speech, she could write, she could read, she was at no loss for words; but her organs of articulation, though free to move, did not respond to her mental impulses to speak. In fact in this case, as in the last, the defect depended not on any default of the supreme centre, but on some incompetence in a subordinate coördinating centre, or on some impediment to the transmission of impulses either between the supreme centre of speech and this coördinating centre, or between the last and the muscles it should control. That the nervous defect was in both cases independent of any structural change in the parts concerned, and involved simply what may be termed a hitch in the mechanism by which articulation and phonation are effected, is proved by the sudden temporary cures of the aphonia under the influence of galvanism, and the suddenness of onset and the suddenness of disappearance of both affections. The only other case of hysterical aphemia which I can recall is as follows:—A gentleman, about fifty-five years of age, with whom I was well acquainted, had been liable for many years to occasional fits, determined by mental excitement, which every doctor who had seen him in them regarded as hysterical, and which, from the description given to me, I thought were undoubtedly hysterical. On the occasion to which I refer there had been a serious panic on the Stock Exchange, and for some time it had been doubtful whether, through defaulting debtors, he would not lose a very large portion of his fortune. The excitement induced one of his so-called "hysterical" attacks, and this was followed for the first and only time by a total loss of the power of uttering articulate language, which lasted for several hours, and was then suddenly recovered from. He had no paralysis at the time, was quite sensible, could understand well all that was said to him, and could express himself accurately in writing.

But the same affection of speech may result from organic disease, implicating the centre or tracts of nerve tissue, presumably disturbed functionally in the cases just quoted. In 1870 I brought before the Clinical Society a very interesting case of the kind. The steward of a steam-packet was attacked suddenly while passing through the Straits of Banca, with a series of severe epileptic fits; on his emergence from which his limbs were powerless, he was stone deaf, and he could not speak. He was taken shortly afterwards to the hospital at Singapore, and was then still deaf and unable to speak, and paralysed on the left side. There was also slight right hemiplegia. He remained in hospital for some months, improved in many respects, and then came to England. He was received into St. Thomas's immediately on his arrival in this country, and just nine months after the onset of his illness. At this time he had manifest weakness in the left leg, complained of pain at the back of the head, and was unable to utter any articulate sound. But he had no paralysis of the organs of speech, he could understand perfectly, and he could keep up a conversation in writing. He had recovered his hearing and was also fairly well in all other respects. It was obvious that his inability to speak depended neither upon paralysis of the organs of speech nor on affection of the supreme centre of speech; but was due to some interference with the transmission of the impulses to speak from the supreme centre either towards or through the centre which regulates the mechanical details of speech. He had been speechless for nine months, and was no nearer speaking now than he was at the beginning of his illness. But he was a sensible man and (as I before mentioned) had complete control over the organs of speech for all other purposes than those of speech; and I determined therefore to endeavour to teach him to speak. I pointed out to my class and to him that the utterance of articulate sounds is a mere mechanical art; that for each letter-sound the organs of speech have to be arranged in a particular manner, and that if thus arranged, and their owner breathes or phonates, or suddenly opens or closes the oral passage, as the case may be, he cannot help uttering the articulate sound due to the particular arrangement of the parts at the time. And I illustrated my meaning by showing him, as I showed Mary D——, how, by certain simple manœuvres, certain simple consonantal sounds—such as those of *p*, *t*, and *f*—could be uttered; and how, by accompanying these several acts with phonation, *p*, *t*, and *f* become converted respectively into *b*, *d*, and *v*. I will not occupy your time by detailing how I, by repeated and progressive lessons, and he, by persistent and determined efforts, succeeded at the end of some weeks in restoring to him the use of articulate language. It is sufficient for me to say, that I first showed him how to utter the simplest articulate sounds; that, then, I taught him how to combine sounds; and that, after he had laboriously made some progress in these accomplishments, and especially after he had acquired some facility in combining two or three letters, his further progress was marvellous in its rapidity. I have quoted this as a case of aphemia dependent on organic cerebral disease; and judging from the patient's history and from the accompanying symptoms, I believe it was. But I admit that the complete recovery which took place is to some extent an argument in favour of the functional nature of his disorder.

Is the chorea which has latterly appeared in my patient to be regarded as hysterical? I do not think it has yet been proved that chorea is due to organic disease of the brain; and we know that (although it presents remarkable relations with heart disease, rheumatism, and scarlet fever) it is largely characterised by emotional disturbance often not unlike that met with in hysteria, and that hemianæsthesia and other symptoms not uncommon in hysteria occasionally become developed during its course. Considering how often rhythmical and convulsive movements of various kinds (some of which would certainly in former times have been called chorea) attend hysteria, it would seem not unlikely that symptoms identical with those of chorea should occasionally supervene as a part of the hysterical programme. A case bearing on this subject that was under my care three years ago has recently been published by my friend Dr. Hadden in *Brain*. In substance it is as follows:—A boy fifteen years of age was on December 20th attacked with a kind of fit, attended, it was said, with faintness, sickness, and convulsions. Similar fits recurred several times during the day, and from that time choreic symptoms showed themselves. On January 16th he was brought to the hospital, and in the casualty-room he was attacked with another fit, in which he became rigid, with convulsive movements of the arms and legs; but he was conscious, emotional, and cried when questions were put to him. His mother said that before the fit came on he complained of tightness at the throat and inability to swallow. When he came to, he was received into the hospital, and was found to present characteristic general choreic symptoms with difficulty of speech. There was no cardiac disease. On Jan. 22nd he complained of a lump in the throat, jumped up, and would have fallen out of bed if he had not been caught. He rolled over on his face, sobbing. When turned over again his back became rigid and his limbs convulsed. He did not lose consciousness; he had no recurrence of fits; his chorea gradually subsided, and he was discharged well on Jan. 31st. The fits were in this case, I

think, clearly hysterical; they seem to have ushered in the choreic symptoms, and they recurred from time to time during the progress of the disease. I cannot venture to assert that the chorea was in this case a phase of hysteria; but I think that this case, in association with that first narrated, and the fact of the emotional affinities between the two affections, render this view at any rate a probable one.

I now come to the paralytic state of the left internal rectus, and the peculiar condition of the muscles supplied by the left portio dura. The paralysis of the rectus was incomplete, but it was obvious, and she saw double. The left palpebral fissure was narrower than the right. The left oral angle was the more pointed, and that half of the mouth opened less widely than the other. Moreover, as I have pointed out, there was always a little twitching of this angle of the mouth, and of the muscles on the same side of the face. The condition of things was not unlike what results from an old attack of facial paralysis, in which recovery only short of perfection has taken place; the muscles regaining their voluntary power but becoming somewhat contracted and liable to flickering spasms. Mr. Nettleship was inclined to regard the narrowing of the palpebral fissure as due to slight ptosis. At any rate it is clear that the facial phenomena were due to affection in the domain of the third nerve and that of the portio dura.

We never got a very complete history of the case. But in the history we obtained there was nothing to show that she had ever had any acute affection of the portio dura, or that the squint and double vision were of old date. One argument against the functional origin of the phenomena is that since they were first observed they have presented no variation whatever; such as they were when she was first seen, so they remain. That hysterical patients may suffer from functional squinting I suppose there is no doubt. Within the last few days I have seen a young widow lady of twenty-five, who during the last month has for the first time in her life been suffering from the ordinary form of hysteria. But she informed me that during the previous ten years she had suffered from paralysis, at one time of one limb, at one time of another, and from loss of feeling, and that several years ago she suffered for some months from a squint and double vision for which she was treated by an oculist. She had no headache or sickness at the time. In relation to this question, I will also refer very briefly to two interesting cases admitted under my care within a few days of one another in the winter of 1882-83.

Eliza H——, a girl of nineteen, was attacked suddenly fourteen weeks before with right facial palsy, and six weeks later with weakness and numbness of the left arm and leg, the leg being affected later and less severely than the arm. She had no fit, headache, giddiness, or sickness. She had never had any serious illness before, nor had she been hysterical. On admission she was a plump and remarkably healthy-looking girl. The paralysis of the right side of the face involved mainly its lower part. She could wrinkle her forehead slightly, and could close her eye, but not firmly. The mouth was drawn over in the most remarkable way to the left side. It was almost wholly to the left of the mesial line, and the left angle was tucked up under her fat cheek so as to be scarcely visible. When she laughed the zygomatici on the right side acted slightly. There was very slight weakness remaining in the left leg. The arm, however, was decidedly weak. There was no anæsthesia. The optic discs were normal, and there was no evidence of disease in any other organ of the body.

Gertrude H——, a girl aged fifteen, after suffering for about a week with headache and giddiness, suddenly, a month before admission, began to squint, and three weeks later began to complain of weakness, numbness, and tingling in the right arm. She, like the other, was a plump healthy-looking girl. She had paralysis of both external recti, mainly of the left, with double vision, and impairment of sensation with marked loss of power in the right arm. She complained also of left-sided headache and some giddiness. The optic discs were healthy, and there was no sign of disease elsewhere. I may add that she, like her contemporary, presented a clean bill of health, and there was no evidence of her ever having displayed the usual symptoms of hysteria.

I need scarcely say that these two girls coming into hospital at the same time, and presenting a striking resemblance to one another in their histories and in their symptoms, attracted a good deal of clinical interest. And naturally, amongst others, the question arose whether their symptoms could be hysterical. I did not take this view of the cases; but you shall judge how far their future histories justify it. The former of these patients gradually but slowly improved. The paralysis of the arm and leg disappeared absolutely in the course of two or three months. The facial palsy made less rapid progress. It had improved by the end of three months, at which time the affected muscles presented the reactions of degeneration. She has called upon me from time to time since; and when I saw her a month or two ago, she was perfectly well, but for a trace of asymmetry in the lower part of the face. The latter patient has been under my care off and on down to the present time, and her symptoms have slowly progressed. She has suffered from variable headache, giddiness, and sickness ever since; the paralysis of the right arm and leg have become almost absolute, and hemianæsthesia of the same side has supervened; paralysis has spread to all her external ocular muscles, and complete ophthalmoplegia externa has resulted; and she has become liable to periodic epileptic seizures, always ushered in by two or three days of increasing high temperature. She has never had any trace of optic neuritis, and remains mentally in perfect health. I do not give the full details of this case partly because for my present purpose it is needless, and partly because I intend before long to publish it together with some other cases of the same kind. Now, were these cases hysterical? I am much more inclined than I was at first to think that this view furnishes the explanation of the former case, but I confess that I am by no means clear on the point. With respect to the latter case, I may state that I recently transferred it to another hospital, and the sister of the ward and the house-physician there settled between them to their own satisfaction that the case was hysterical, and that the girl was malingering. That she is not a malingerer I am absolutely certain. Whether the case can be regarded as hysterical depends on the limits one assigns to hysteria. I have reasons for believing that no organic changes will be found in the nervous centres after death. But the continuous progress of the case from worse to worse, and many of the special symptoms that are present, are not characteristic or even suggestive of hysteria. I do not think that these two cases are, in any sense, conclusive with respect to the question they have been adduced to illustrate; but I submit that my cases collectively point to the possibility of local paralysis being at times of functional origin, and, if of functional origin, occasionally, at any rate, hysterical.

To return to the subject of hysterical defects of speech. It is not only aphonia and aphemia which are met with in hysteria. The following case shows that we may have both stammering and aphasia. Two or three years since a lady, thirty-two years of age, consulted me. Many things, needless to recapitulate, had conspired during the previous eight or ten years of her life to make her emotional and to induce hysteria. About two years before I saw her she had an attack of "gastric fever." She was ill for a long time, and when convalescent became insensible for several days, and presented symptoms somewhat like those she consulted me for. Again three months ago she was ill for three weeks with symptoms of the same kind. Her present attack was of a month's duration, and was getting worse. Her condition was very peculiar. Women rarely stammer, and she was not an habitual stammerer. But now she stammered so badly that it was difficult to understand her. Her stammering moreover was odd. She began by repeating a word or two many times, then, perhaps similarly repeated one word and then the initial letter of the word, thus: "I think, I think, I think," then "I, I, I," then "think, think, think," and then the consonantal sound represented by *th*. Accompanying the stammering were rapidly repeated distortions of the face. These involved both sides, but were most severe on the right. The muscles of the eyelids twitched incessantly until the eyes were nearly closed. The corners of the mouth were similarly affected; and the other facial muscles, but in a less degree. The convulsive movements extended even to the muscles of the neck. She had difficulty in writing. Slowly and with deep consideration she could generally manage to translate printed words into written words. But when she tried to express her thoughts in writing she soon began to make hopeless blunders, and to repeat letters; nor could she succeed in writing her name. She could not recollect the forms of the letters she wished to use, nor could she recall their names. I tried to make her perform simple sums

in addition, but she could not do it, and the figures were meaningless hieroglyphics to her. She said she could not read anything so as to understand it; that for the most part she knew the words which were actually under her eyes, but always when she reached any one word she had quite forgotten those that preceded it, and hence could not catch the meaning of even the shortest sentence. She could name anything she saw, but had great difficulty in recalling the names of things which were not present or visible. I saw her again about nine months later. I learnt then that all her symptoms had disappeared in the course of a few months, but that they had recently returned. She had had recurrence of stammering, but that was not present now. She presented, however, all the old spasmodic twitching of the facial muscles, all the old difficulty in writing and in the recognition of letters, and all the old forgetfulness of names of things not before her. She could not recollect the name of the day or of the month, and she told me that a few days previously she had had, as she thought, a serious and interesting conversation with a lady whom she knew, and who called upon her next day and asked her if she had not been ill, for she had talked nothing but nonsense. The patient had occasional attacks of unconsciousness, which, for anything I know to the contrary, may have been either attacks of syncope or epileptic seizures. I have no sufficient reason, however, for doubting that the case was essentially one of hysteria; and that was, I believe, the view of the medical man under whose charge she was.

*(To be concluded).*

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REMARKS UPON THE

# CHOLERA BACILLUS OF KOCH.

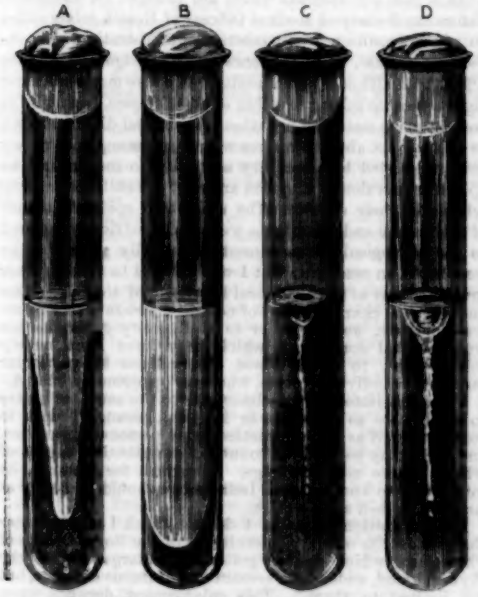
BY EDGAR M. CROOKSHANK, M.B.LOND.

THE works of Koch and his collaborators, of Hueppe, Johne, Babes, and others, have made us acquainted with the most recent and trustworthy methods of bacteriological research, which are of such especial importance in enabling us to decide the burning question of the present day—the etiology of Asiatic cholera. The interest in the discovery by Koch of a cholera bacillus, and in his methods of its investigation, is increased by the approach of summer and the possibility of a fresh outbreak in Europe. Consequently the attention of the profession and of the scientific world has been drawn to this subject throughout Germany, Italy, Spain, and France—in fact, almost everywhere; while this interest especially finds expression in America in the demands in the medical journals for a thorough acquaintance with scientific bacterioscopy, and in this country in the recent discussion at the Royal Medical and Chirurgical Society. The result of this discussion, however, though convincing to those who know how to appreciate the importance of the arguments brought forward by Watson Cheyne, Heron, and Warden, is in several respects very unsatisfactory, more especially for those who do not fully realise the minute and searching methods employed in bacteriological research by the school of Koch, and in the face of contradictory opinions the medical public remains without any guide. Having through the kindness of Professor Virchow shared the bacteriological laboratory of Dr. Babes in the Pathological Institute of Berlin, and for some time almost entirely restricted my attention to the study of comma bacilli, it is my aim in these remarks, by describing in the simplest form possible the methods employed, to enable all to judge for themselves, and, I trust, not only to appreciate, but to be convinced of, the searching arguments brought forward by Koch to prove the essential *rôle* of this micro-organism in the causation of the disease, and to be provided with a practical and sure means of diagnosing true Asiatic cholera. By reference also to some of the most recent researches, and by commenting upon some of the points raised at the above-mentioned debate, one can clear up many difficulties which lie in the way of accepting the conclusions of Koch. Those who are acquainted with Koch's comma bacillus can easily demonstrate its presence in the intestine in all cases of true cholera. Hitherto nearly one thousand cases have been examined by capable observers, and have given positive results; and there does not exist one observation which is contradictory, nor can one find the same microbe in other maladies. Physicians can therefore accept the presence of the comma bacillus of Koch as a pathognomonic sign of cholera, and in so doing it is an essential part of one's duty to become acquainted with its nature. The character of the comma bacillus is manifested in its habitat, its form, its cultivation, and its pathological action. The morphological characteristics have been fully described in the writings of Koch and in the reports of the Berlin Cholera Conferences, and need not be repeated; but inasmuch as it is often difficult to distinguish other bacilli which are present in the ejecta from the bowels and resemble it more or less in microscopical appearance, it is most essential to become familiar with the methods of pure culture which have been employed by Koch.

It is necessary, however, to obtain a characteristic culture, always to employ a 10 per cent. gelatine, slightly alkaline (Babes), and as it is difficult to prepare, it would be best to procure it ready made. Provided, then, with ready prepared sterilised tubes, a platinum needle (two or three inches of fine platinum wire fixed at the end of a glass rod), a few dinner- and soup-plates, half a dozen small panes of glass (6 in. by 4), a solution of sublimate (1 in 1000), a common dinner knife, some potatoes, methyl violet, a microscope, and its usual appendages, the medical man (especially the medical officer of health), who has not access to the elaborate apparatus of a bacteriological laboratory, has all that is required for conducting the simple methods which Koch often had recourse to and employed with success in India. For the plate cultures improvise a damp chamber by utilising a common dinner plate and a soup plate, both previously washed with sublimate, the plate having a piece of filter paper laid upon it, which is also moistened with sublimate. A small plate of glass, sterilised by carefully heating one surface over a spirit lamp, is placed on the filter paper, as level as possible, with the sterilised surface uppermost. Prepare two such chambers, then liquefy the gelatine-peptone broth in two tubes, and introduce into one by means of the platinum needle a mucous flake from choleraic discharge, and stir it well up; from this inoculate the second tube by introducing the needle five times, and stirring round as before. Lastly, pour the gelatine out on the plates in the form of a ring, so that every part can be brought into the field of the microscope. At a temperature of from 16° to 20° C. little specks commence to be visible in about twenty-four hours. They consist of isolated colonies, and when examined with a low power and a small diaphragm have the following characteristics. They appear as little masses, granular, and slightly yellow, and of a faintly yellowish-red tinge. They liquefy the gelatine, sink down, making a little excavation, at the bottom of which one recognises the little punctiform colony. By means of the platinum needle, with the extremity bent into a miniature hook, one can, under the low power of the microscope, select and pick out a typical colony and inoculate a tube. Another colony can be selected in the same way and well spread out with a needle on a cover glass, and stained after the method of Babes. This consists in putting on the cover glass so prepared a drop of a weak aqueous solution of methyl violet (B) and leaving it for a minute; then place the cover glass on a slide, and with filter paper remove the excess of liquid, and examine. A rapid examination is thus made of a pure culture of the bacilli. In about twenty-four hours the tube-culture commences to display its absolutely distinctive appearance. Liquefaction sets in slowly, commencing at the top of the needle tract around an enclosed bubble of air, and forming a funnel continuous with the lower part of the needle tract, which preserves for several days its resemblance to a white thread (Fig. C, D). In about eight days, however, this too is liquefied, with the exception of the deepest part of the needle tract, which disappears only at the moment when all the rest of the gelatine underneath it is liquefied. Babes has shown that the cultivation on an oblique surface of agar-agar peptone-broth is also quite characteristic. By inoculating the surface vertically with the needle, in about two days a culture is developed in the form of a plate, semi-transparent, and with well-defined margin, while the liquid which exists at the bottom of the oblique surface becomes milky. If one compares this with the behaviour under similar circumstances of other comma bacilli, the difference is in all cases easily appreciated. The potatoes are prepared by removing eyes and rotten spots, well washing, soaking in sublimate for half an hour, and then steaming for the same length of time. Holding them, with

the fingers previously dipped in sublimate, they are cut in two with a knife which has been sterilised by heating in the flame of a spirit lamp, then placed in damp chambers extemporised as before, and inoculated by smearing the micro-organisms over the surface with the flat of the knife. Koch's comma bacillus will only grow at the temperature of the blood (37° C.), forming a slight brown transparent layer.

If, on the other hand, we are dealing with a case of cholera nostras, we shall by the same procedure produce the characteristic biological appearances of the Finkler bacillus. In the tube culture we find that the gelatine in two or three days is liquefied along the whole tract of the needle puncture, excavating the gelatine in the form of a conical sac, and resembling in some degree the finger of a glove turned inside out (Figs. A and B). In glass plate cultures the colonies have a slightly yellowish-brown colour; but they are larger and rounder than the colonies of Koch's bacillus, have a well-defined border, and under a higher magnifying power a distinctly granular appearance. They liquefy the gelatine much more quickly, and give rise to a penetrating odour and rapidly become irregular in shape. Even in two or three days the gelatine on the second plate with only a few colonies is altogether liquefied. On agar-




PURE CULTIVATIONS IN GELATINE-PEPTONE-BROTH.
A. Finkler's bacillus, twenty-four hours old.
B. " " two days old.
C. Koch's cholera bacillus, twenty-four hours old.
D. " " " two days old.

agar the Finkler bacillus forms a white layer much more quickly; the liquid at the bottom of the oblique surface also becomes milky, but after a certain time a brown, coffee-coloured layer appears, which is very characteristic. On potatoes the Finkler bacillus grows rapidly at the ordinary temperature of the air, the culture has a brownish colour with a whitish border, and the surface of the potatoes appears to be eaten in.

Other comma bacilli differ in that they cannot be cultivated on gelatine, with the exception of a comma bacillus very frequently found in water. This liquefies gelatine very slowly, and forms on its surface a white pellicle (Babes). The last link in the chain of evidence is afforded by the effect of the inoculation of a pure culture of Koch's comma bacillus in animals. Nicati, Rietsch, Koch, Ermengen, and Babes have inoculated the bacilli with success in the duodenum. Babes, who used all practical antiseptic precautions, had three successful cases out of six; the guinea-pigs, which were the animals experimented upon, exhibited at the post-mortem examination the appearances produced by cholera without any trace whatever of peritonitis or putrid infection. In the intestine, in the mucus typical comma bacilli were found and pure cultivations obtained. Recently it is reported that Koch, by a new method, without forming any lesion, has produced choleraic symptoms, without exception, in a great number of animals. Koch and Babes have also studied the pathological appearances produced by the cholera bacillus. They have found in all cases, more or less, in the intestine that the epithelium to a great extent is missing, the superficial tissue necrosed, the glands dilated, their epithelium swollen, in the glands and sometimes in the inflamed tissue more deeply, and in the necrosed parts they have established the presence of the micro-organism. In internal organs of chronic cases affected with parenchymatous degeneration, round or oval bacteria are sometimes seen; they are also pathogenic (Babes), but these latter are not in any way characteristic of cholera, but are considered to be merely the result of septic complication.

From these investigations we are led to the following conclusions:—That the presence of the cholera bacillus of Koch is quite characteristic of cholera; that the comma bacilli of Koch exist in the tissue of the intestine; that they are, there is every reason to believe, the actual *causa causans* of cholera. With regard to the second statement, one can only conclude that if observers have failed and do fail to find the bacilli in the tissues, it must be that either they are not masters of the technique, or that they have not sufficiently sought for them. The method employed by Babes is to cut very thin sections of a recent case of cholera, if possible immediately after death, and especially from the immediate neighbourhood of a Peyer's patch. Then leave the sections for twenty-four hours in a watery solution of fuchsin (fabrique de Bale), wash a little in sublimate (1 in 1000), pass rapidly through alcohol and oil of cloves, thoroughly dry with filter paper, and preserve in Canada balsam. From material supplied by a case examined by Babes in Paris I have also succeeded, by closely following his method, in staining the bacilli in the tissue and demonstrating their presence with a Zeiss $\frac{1}{12}$ oil immersion lens. With regard to the inoculation of animals with cholera bacillus, one must confess that it is not easy to avoid peritonitis or accidental infection, but it is easy to be convinced that if one does avoid these errors one will have a certain number of cases which give positive results. That Dr. Klein has so often encountered accidental infection may account for his want of success. Emmerich has asserted that he has found in the internal organs a special microbe which causes choleraic symptoms by inoculation. This, however, is in direct contradiction to all other observers, who have shown, like Babes, that if there be a pathogenic microbe present in the organs, it has penetrated through the necrosed tissue of the intestine, and that it is nothing more nor less than a pyogenic or septicæmic bacterium.

## FERROCYANIC TEST PELLETS FOR ALBUMEN.

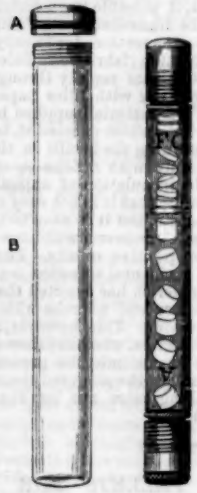
BY F. W. PAVY, M.D., F.R.S.

THESE pellets afford a ready, portable, reliable, and delicate clinical test for albumen. They require no spirit lamp to be employed and supply information which can be accepted without needing the application of any other test for correction or corroboration. When albumen is present it does not fail to be indicated by the production of a precipitate; and, on the other hand, when a precipitate is produced albumen, as far as I yet know, is the only principle that occurs in the urine to occasion it. With these qualities the ferrocyanic test commends itself as specially adapted for general use in medical practice.

The sketch on the following page shows the portable character of what is needed for the application of the test. The whole appliance can be carried in the pocket like a pencil case, which it only to a trifling extent exceeds in size. There is a celluloid tube (C) for holding the pellets, and this fits into a glass tube (B), which is employed as the test tube. No heat being required for the application of the test permits the glass tube to be made of sufficient thickness to be carried in the pocket without danger of breaking. The celluloid tube has a partition inside to keep the acid and ferrocyanide pellets separate, and at either end there is a screw top. The glass tube is provided with a metal cap (A),

which screws on and closes it. Messrs. Maw, Son, and Thompson of Aldersgate-street make the apparatus.

Under the form of acetic acid and ferrocyanide of potassium, the ferrocyanic test has for a long time been favourably regarded as a delicate test for albumen. Senator, in his recently published monograph on albuminuria, in referring to the drawbacks belonging to heat and nitric acid, speaks thus[1] of the test:—"As, however, notwithstanding these drawbacks, the test in question [heat and nitric or acetic acid] is the only one in common use, it will not be superfluous to give a brief account of far more reliable tests which should be used in doubtful cases, or I would rather say, in all cases in future. These are as follows: (1) To acidify the urine with acetic acid and then add carefully a (concentrated) solution of ferrocyanide of potassium, according to Hofmeister the most delicate of all the tests for albumen, and which precipitates all the albuminous bodies, but not peptone." To adapt the ferrocyanic test conveniently for clinical use, it occurred to me to follow what I had already done as regards the cupric test for sugar, and bring it into the pellet form. At first I placed the acid (citric) and ferrocyanide in the same pellet, and these pellets were introduced to the notice of the profession at the Clinical Society in the early part of 1883. Subsequently, for reasons that presented themselves as experience was gained with the employment of the test, the agents were placed in separate pellets, and it is in this form that I now recommend it. As the pellets are devoid of any foreign principle whatever, there is nothing to undergo deterioration by keeping. Citric acid is just as eligible for the purpose required as acetic acid. Enough is supplied in the pellet to secure the presence of free acid in any alkaline specimen of urine that is likely to be come across, provided the quantity mentioned in the instructions for the application of the test is taken. Should any doubt exist, two pellets can be used in place of one. The ferrocyanide pellet consists of the sodium instead of the potassium salt, on account of its yielding a looser and more speedily soluble product. The pellets are made by Mr. Cooper of 66, Oxford-street.




In using the test about a drachm of urine is taken as the quantity to be employed. An acid pellet is dropped into it, and with a little agitation is found to be quickly dissolved. One of the ferrocyanide pellets is next dropped in, and the urine again shaken to facilitate solution. If albumen is present, a precipitate immediately appears.

It is necessary that the test should be used in the manner which has been mentioned—that is, the acid pellet must be first dropped in and dissolved, and then the ferrocyanide pellet added. The latter pellet it is which supplies the information required, and if a precipitate is by this pellet produced, the conclusion may be drawn that albumen is present, for the test does not precipitate peptones or other principles incidentally present in the urine. For sensitiveness the ferrocyanic will bear comparison with any other albumen test; and should no precipitate be rendered visible it may be safely inferred that no albumen is present. There is no need therefore for anything beyond the test itself being employed, and no spirit lamp being required, gives it a great advantage.

It occasionally happens that a precipitate is produced by the acid pellet alone, but no fallacy should arise from this. It is the ferrocyanide pellet which affords the evidence of the presence or absence of albumen. The acid pellet only supplies a preparatory condition to allow the ferrocyanide to act, and does not constitute the test. The usual source of the precipitate referred to is uric acid, and by diluting the urine with about an equal bulk of water, it is prevented from appearing. In this way the interference thus occasioned to the application of the test is removed. Mucin also is precipitated by an acid, and the best plan here is to take two test tubes and to treat the urine in one with the acid pellet alone, and in the other with both pellets. A comparison of the two will show whether albumen is present or not.

Should the urine be turbid from lithates, it may be cleared either by the application of moderate warmth, or, what may be more convenient, the addition of about an equal bulk of hot water.

A most portable little case is made by Jahncke of Canonbury Works, Dorset-street, Essex-road, N., which contains the two kinds of pellets for albumen, the capric test pellets for sugar, a spirit lamp, test tube, and urinometer. This gives all that is required for the ordinary examination of the urine, and makes an elegant, compact, and convenient little case.

Grosvenor-street, W.

[1] Sydenham Society's Translation, 1884, p. 14.

## THE ETIOLOGY OF GOITRE IN ENGLAND[1]

BY W. N. THURSFIELD, M.D.

As a rule the subjects which are brought for discussion before the Society of Medical Officers of Health relate either to matters connected with sanitary administration, or to infectious disease, or to influences acknowledged to directly affect the health of the community. As goitre may not at first sight appear to belong to either of these classes, it may be as well for me to state that my attention was first directly drawn to this subject about three years ago, in consequence of my being requested by a sanitary authority to inquire into an epidemic prevalence of goitre amongst the children in some schools in their district. The undoubted epidemic nature of the disease and other facts were so diametrically opposed to the etiological views almost universally given in the text-books on medicine, that I was induced to make further investigations as to the general liabilities of the population and physical characteristics of certain districts where goitre was endemic, and, in order to avoid hasty generalisation from general conditions, which may have been merely coincidences, to check these observations by particular inquiries in individual cases, wherever opportunity offered.

I have restricted my conclusions as to the cause of goitre to the disease as it occurs in England, because I wish to confine myself as far as practicable to personal experience, and there may be in other countries contributing causes of which I have no knowledge. It would, for instance, be interesting to know why in India goitre should be nearly as common in men as in women.

For a definition of goitre I do not think I can do better than follow the official nomenclature of the Royal College of Physicians, which defines goitre as "enlargement of the thyroid gland, endemic in certain mountainous districts, but not limited to them." This enlargement depends upon simple expansion, hypertrophy of tissue, or vesicular distension, or a combination of all three, and results from persistent abnormal increase in the blood in the gland, or persistent abnormal call upon the physical action of the gland, and usually upon both combined. Goitre is much more prevalent amongst females than males, and certainly in my experience affects in undue proportion the industrial class. The primary causes of goitre are as follows: (1) Climatic, (2) physiological (including sex, heredity, &c.), (3) industrial, (4) dietetic, (5) neurotic and strumous diathesis.

In localities where goitre is endemic two of the above causes are always present, and generally three or four, in various degrees of preponderance, and the preponderating cause will often be found to differ in different localities. Sporadic cases of goitre occurring in localities where goitre is not endemic, when not directly imported, are the result of the preponderating influence of some one or two of the above causes, probably conjoined in many instances with the influence of heredity. The causes are mentioned in the order it will be most convenient to consider them. I have not referred to absence of sun light, confined atmosphere, and other causes considered as contributing in some

[1] Paper read before the Society of Medical Officers of Health, May 13th, 1885.

countries, as these are not in my experience concerned in producing English goitre.

*The Climatic Influence.*—This is as a rule the chief factor in the production of endemic goitre. Endemic goitre may elsewhere exist in low-lying plains, due doubtless to the combination of some of the causes above alluded to; but in England, so far as my experience goes, the endemic prevalence of goitre is not found at much less altitude than is indicated by a fall in the column of mercury equal to about three-quarters of an inch. This diminished atmospheric pressure in hilly districts, together with the climbing of hills and other conditions leading to sudden alterations in the circulation, combined with the natural distensile property of the thyroid, is, I believe, the origin of the goitrous diathesis. In the goitrous districts abnormal enlargement of the thyroid occurs at any age up to adult life. At the present moment I could show cases at almost any age from infancy upwards. It appears, however, usually to show itself from five to twelve years of age, perhaps most commonly at about eight years of age; but where medical advice is sought, it is not generally until a marked enlargement coincides with the first catamenial period or some other cause interfering with the circulation. It is this circumstance, I think, which has given rise to the statement found in most text-books that it is at the above period that goitre usually makes its first appearance. It is my experience that a much larger proportion of cases of enlargement of the thyroid in a goitrous district will be found in females under the age of thirteen than above it. The enlargement in the majority of cases then disappears; in some, however, it is persistent and increases much, and it is these cases which are ordinarily known as goitre. This persistence is owing to causes specially interfering with the circulation of the thyroid or otherwise conducive to hypertrophy of the gland. The cause most directly conducive is, however, diminished pressure of the atmosphere.

*The Physiological Influence.*—Of the thyroid gland little is definitely known beyond its anatomical structure, which is that of a very vascular ductless gland, with a dual supply of bloodvessels and nerves from different sources. The thyroid has this peculiarity, that of all the glands of the body which we can see and feel it is most prone and most capable of alteration in volume, and it is to this peculiarity that goitre is due. It is, in fact, the giving way under varying degrees of increased force below, or diminished pressure above of the point of least resistance in the human body externally. In other words, the abnormal and persistent expansion of a structure normally distensile for physiological reasons. I have no personal information on the point, but it is stated that goitrous tumours increase in size in wet weather—i.e., with a low barometer; and a locality with a high local humidity might in the same way be a contributing influence. The function of the thyroid in the human body appears to be of a double nature—one almost mechanical, the other physiological. One purpose served by the thyroid appears to be to act as a diverticulum for the circulation on the occurrence of arterial tension in the brain or uterus. That it should so act in the case of the intercranial circulation might be anticipated from the very intimate anatomical relation between the arterial supply to both, and cases have been recorded of acute goitre supervening on intense excitement. This function or habit of the thyroid has much to do, as will be presently shown, in the production of goitre. That it does so act in the case of the uterus is also an observed fact, sudden enlargement of the thyroid frequently supervening in connexion with menstruation and pregnancy, and in some cases a periodical expansion occurs. As no direct anatomical connexion between the uterus and the thyroid is traceable, we are driven to the explanation of correlation of nerve influence between the two organs. That intimate sympathy exists between the generative organs and those of the throat is obvious from well-known facts; and the liability of sudden enlargement of the thyroid to follow uterine excitement appears to have been utilised for practical purposes both in classical and mediæval times. This function or habit of the thyroid would account for the greater liability of the female to suffer from enlarged thyroid. The thyroid is at all ages normally proportionately larger in the female than in the male; and the fact, as I have observed, that the preponderance of cases of enlarged thyroid amongst females is found, though perhaps not to the same extent, in childhood as in adult life, is evidence that this special liability is not, as has been suggested, owing to the greater use of water as a beverage by females, but is a liability of the sex, and doubtless the result of a natural provision for equalising the sudden alterations in the circulation to which females are specially liable.

As regards the function of the glandular apparatus of the thyroid (the vesicles, &c.), little is known definitely. Physiologists seem generally to agree that the gland performs some office in connexion with the composition of the blood. Dr. Baber frequently found the vesicles to contain red blood-corpuscles in various stages of degeneration and decolourisation, and concluded that the gland was concerned in the retro-transformation and excretion of the elements of the red blood-corpuscles. This assumption, if correct, has a most important bearing, and may help to throw light upon the mysterious but undoubted occasional connexion between the use of certain drinking waters and the production of goitre, and will be referred to subsequently in connexion with that point. Goitre has a most decidedly hereditary tendency. I have seen many such cases both direct and collateral. It has been suggested by Dr. Woakes, on analogical grounds, that this hereditary tendency would be most marked where there was a strumous taint, inducing goitre by abnormal relaxation of the arteries of the gland, the result of neurosis of the cervical ganglia. The cases, however, in which I have noticed heredity have generally been of a high physical standard of development, and of an average intellectual standard.

*The Industrial Influence.*—That goitre is frequently entitled to be considered an industrial disease I entertain no manner of doubt whatever. Carrying weights on the head or otherwise, so as to interfere with the cerebral circulation, is a most potent contributing cause. It requires, however, to be combined with the climatic or some of the other influences alluded to, and even in goitrous districts I have obtained strong evidence that for the industrial influence to be operative it is necessary as a rule that it should commence at or soon after puberty. I am well acquainted with two populous localities both situated at an altitude of about seven hundred feet. In both goitre used to be endemic, and is so to some extent at the present time. In both the water-supply is the same as it has been from time immemorial; in both there has been a most marked diminution in the number of cases of goitre, especially of the more severe kinds, and the only alteration in the habits or liabilities of the inhabitants which could at all affect this has been the cessation on the part of the young females of the locality of the habit of carrying weights on the head in their employment in connexion with the coal and ironstone mines, also their daily water-supply, &c.; as having acquired the ability to readily carry weights on their heads, they adopted that mode of carrying everything. The present generation of females in the locality, not having had a similar education, carry water &c. in the ordinary way. Of one of these localities I have intimate knowledge, and well remember as a boy passing through the streets to have frequently noticed the repulsive looking huge goitrous tumours of a kind one seldom, if ever, sees now. At the present time the alteration is most marked and is at once admitted by the older inhabitants. This district is a mining and manufacturing one, more flourishing years ago than now, and situated close to a navigable river, and no explanation of greater mixing of population and cessation of intermarriage would apply here. The only alteration here has been industrial. Years ago this locality was so notorious for goitre as to give a name to the affection in that part of England. The women were also celebrated for their ability to steadily carry great weights on their heads, and at certain seasons of the year many of them were engaged to go to other localities and occupations where such an accomplishment was desirable. Following up this clue, I have found several instances of sporadic goitre where the only member of the family affected with goitre has been the only one who had carried weights on the head habitually; these have generally been people dwelling at a considerable altitude. In carrying weights on the head the return circulation of the neck is retarded and the arterial stimulated, conditions directly tending to congestion of the thyroid, and this I believe to be the most potent industrial influence, but any heavy exertion has a tendency to the same effect; and this would probably explain the not unfrequent cases in which domestic servants develop goitre in non-goitrous districts. In these cases there would, I think, generally be present hereditary tendency to goitre or a strumous and neurotic diathesis. I have ascertained that the traditional practice of one eminent

medical man who practised in a goitrous district in the midlands before the introduction of iodine was to strictly enjoin upon his goitrous patients the necessity of not carrying weights on their heads and to boil the drinking water. This boiling of the water was probably intended to get rid of some of the lime salts, but it would also precipitate the iron where lime was present.

*The Dietetic Influence.*—If in my investigation into the origin of goitre I could have made my mind a complete *tabula rasa* as to all that I had previously heard or read on the subject, I do not think I should have found it necessary to consider the probable influence of the water at all in the matter. I am, however, disposed to think that in some of the localities water was certainly a contributing cause. In each of these cases a theory of excess of saline and earthy matters in solution, or of iron in solution in small quantities, would have been equally applicable. I have adopted the theory of iron, as it appears to me that it can be more readily and scientifically connected with hyperæmia of the thyroid body than excess of dissolved matter in the water consumed. In looking through the various text-books of medicine, nothing is more striking than the uniformity with which the quality of drinking water is assigned as the cause of goitre, though on the question of the element in water producing the evil the diversity of opinion is almost as remarkable. Personally I venture to express a belief that water is by no means essential to the production of the disease, and has frequently nothing to do with it. That every kind of water from snow-water downwards has been credited with producing the disease is presumptive evidence that water in some instances has had nothing to do with it, and I am satisfied that under favourable conditions of climate and industry goitre may occur altogether independently of the water, and, in the epidemic above alluded to, the water-supply of the majority of cases was derived from the hard Cambrian formation, and to quote the report of the well-known analyst, Mr. Sutton of Norwich, was "one of the purest natural waters which had ever come under his notice or of which he had seen any record." It did, however, contain slight traces of iron. Indeed, the very fact of the existence of an epidemic is, in the case of such a disease as goitre, strong evidence that water had nothing to do with the malady. Water has, however, been credited as the cause of goitre from the earliest records of medicine, and there is abundant testimony that it is often a potent contributing cause of the affection. To my mind no satisfactory explanation as to how it acts has yet been afforded, and on this point I speak with special diffidence. The theory I have to offer in the explanation of the goitriferous property of certain waters has however, I believe, sufficient basis of fact and probability to justify my bringing it before you. Of the numerous hypotheses which have been brought forward to explain the influence of water in the production of goitre, the two which have received most support from observers on the subject, and which appear to have the broadest basis of the fact are (1) the theory that goitre follows the use of water from magnesian and limestone rocks, and (2) the theory that the presence of iron pyrites in the strata from which the water is drawn is the cause. I believe that in the coincidence of these two may be found the true explanation, or, to speak more accurately, that the presence of iron in the strata in a form liable to pass into a soluble salt of iron on meeting with the ordinary spring water of the district may account for the above discrepancies, and afford a rational explanation. I am quite aware of the objection to the above theory, that iron is very universally diffused and constantly occurs in water where no goitre is found. This would, however, apply with equal force to any of the other properties of water which have been suggested as the cause. Iron pyrites is insoluble, but when brought in contact with spring water containing carbonate of lime and magnesia in carbonic solution it gradually passes by a process of oxidation into carbonate of iron. This salt of iron is, according to Professor Ringer, most readily and directly assimilated by the system. Now, the mode in which the water tends to aggravate or promote goitre may possibly be as follows: Iron is in a certain sense food, and is necessary and conducive to the formation of the red corpuscles of the blood. Administration of iron in anæmia increases the number of the red blood-corpuscles and the amount of iron contained in them, and although such result may not take place in health, it is not too much to assume that a readily assimilated form of iron dissolved in minute quantities in water would act as food for and stimulate the production of the red corpuscles, and so throw more work upon the glands which deal with these corpuscles in the system. Now, the most recent view as to the physiological function of the thyroid appears to be that it is an excretory organ for the effete blood-corpuscles, and may it not be that the observed effect is the result of undue ingestion of that form of food with the excretion of which the gland is concerned? I use the word food advisedly, because I believe (assuming the theory to be correct) the result to be due not to the ingestion of large quantities of iron, but to the habitual and constant consumption of minute traces of iron in a most readily assimilable form, and which would pass into the system as albuminate of iron. The carbonate of iron indeed under such conditions in natural water would be constantly in a state of change, and would only exist in the water in small amount in ordinary circumstances, and imperceptible to taste, and being a most unstable compound it is readily precipitated. This is a reason why iron in this form is not unfrequently overlooked, as after the lapse of some time and a little exposure the iron is precipitated, and no reaction follows the tests for iron applied to water in ordinary sanitary analysis. The therapeutic effects of iron may throw some light upon this point. When iron is administered therapeutically, a sensation of fulness and pain in the head sometimes supervenes, and is recognised as indicating the desirability of discontinuing the medicine. This would give support to the theory advanced. On the other hand, anæmia is frequently present with goitre. This may be due to the blood-elaborating function of the thyroid being out of order; but iron is said, in some cases of anæmia accompanied with goitre, to produce marked benefit. I believe these cases will be found where a strumous and neurotic diathesis is the preponderating cause. In connexion with this subject, I think it well to refer to the instance so frequently quoted of French peasants, who are alleged, in order to avoid the conscription, to artificially produce goitre by drinking goitriferous water. According to the best account I can obtain, the conscripts are said to "go up to Briançon." Briançon is, I believe, upwards of four thousand feet above the sea, and this fact, combined with the goitrous diathesis of many Frenchmen, would be powerful contributing influences.

*Is Goitre diminishing in England?*—Endemic goitre certainly is. In a disease where the influence of heredity is so marked, we may assume that the endemic prevalence may to some extent in isolated communities have been due to intermarriage, and that increased migration and facilities for travel would certainly tend to produce a decrease; but I am persuaded that the chief cause is due to the disuse of the practice of carrying weights on the head. This would chiefly apply to those hilly districts where a slight contributing influence, in addition to that of diminished atmospheric pressure, is all that is needed to induce the deformity. Throughout England generally there has been, during the last quarter of a century, a marked alteration in the custom of the rural population in the matter of carrying weights. To carry weights on the head safely, and with comfort, requires early training and practice. Before the introduction of tins with handles, the wooden milk pails with side handles were of such a shape and make that when full they could not well be carried by one person except on the head. Hence the early training and acquired facility in carrying weights on the head. The introduction of tin ware with handles has altered this, and led to the disuse of the practice, and, as I believe, may thus be said to have contributed to the diminution of goitre in some agricultural districts in England. With sporadic goitre in towns the case may be different. This affection is said by some to be on the increase. If this be so, and, considering the element of debility present in so many of these cases, the neurotic influence may be the preponderating one, and the theory advanced by Dr. Woakes is probably correct—viz., that this affection shares in a general increase of neurotic affections in the present age.

*Epidemic Goitre.*—Time will not allow me to do more than to refer to the epidemic of goitre mentioned in the commencement of this paper. It had been noticed for some months before I investigated it, and the cause I believe to have been purely climatic, probably aggravated by some meteorological condition peculiar to the year.

*Connexion of Goitre with Cretinism.*—On the theory of goitre being a circulatory disease and dependent to a large extent on atmospheric influences, the connexion of cretinism with goitre seems to admit of explanation. In some countries the goitriferous influences, including the strumous

diathesis, may be sufficient to produce goitre and cretinism in the same individual. In this country cretins are rare, and in the majority of such cases in which a post-mortem examination has been obtainable, the thyroid has been found absent. Now, assume an infant of a strumous diathesis with deficient arterial tone under strong goitriferous influences. In the absence of the safety valve action of the thyroid, a cretinous condition would be expected to result. Indeed, the converse may be true, and I have recently met with a microcephalic idiot with a huge goitre.

## NOTES ON TWO CASES OF REMOVAL OF THE JAW FOR TUMOURS.

By F. F. PERRY,
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THE cases to which the notes below refer occurred during the present year and exhibit several points of interest.

CASE 1. *Large naso-pharyngeal polypus, removed by displacement of the superior maxilla.*—Badawah, Mahomedan, male, aged forty, was admitted into the Mayo Hospital, Lahore, on April 26th, 1884. His general health fairly good. Nothing noteworthy regarding his family, habits, &c. His present illness commenced three years ago, when he noticed some obstruction in his right nostril. Since then the obstruction has progressed gradually with swelling of the right cheek, difficulty in breathing and swallowing, and a moderate amount of pain. Urgent symptoms, connected with dyspnœa, dysphagia, and want of rest, have been present during the past three or four months, and lately he has lost much flesh.

*Present state.*—A thin and weakly-looking man, evidently considerably emaciated and with a marked look of distress; breathes with mouth wide open, and voice has a marked nasal twang. The right cheek is seen to be bulged outwards *en masse*, the outline of the bone not being interfered with. At the inner angle of the right eye is a soft swelling, the shape and size of an almond, which can be emptied of thick mucoid material into the nose by applying pressure over it. Both nostrils are completely blocked, the right by a soft reddish growth which extends to within a quarter of an inch of the orum nasi, and the left by the septum, which is pushed over in a very marked degree. On looking into the mouth the hard palate is seen to be natural, but the whole of the upper two-thirds of the pharynx is occupied by a rounded mass which pushes the soft palate down in front of it, so as to interfere considerably with respiration. Marked dysphagia is also present, and liquid food only can be taken. The diagnosis of naso-pharyngeal polypus of large size and probably high attachment was made. The patient's general condition was good, and he was very anxious for something to be done.

On April 28th chloroform gas was given by the mouth, but produced troublesome symptoms owing to pharyngeal obstruction. Tracheotomy was performed and the inhalation of chloroform carried on without further hitch through the tube. The right superior maxilla was then displaced in the ordinary way, the superficial incision being carried through the centre of the upper lip, along the side of the nose and lower margin of the orbit, and the flap turned downwards. The bone was then divided by saw and bone forceps and displaced outwards, the soft palate being separated transversely from the hard on the right side. An enormous soft reddish growth was found occupying the naso-pharyngeal and right nasal cavities, having three or four points of attachment to the under surface of the skull. The largest portion (about the size of a medium orange) was detached and removed with difficulty through the mouth. Various smaller pieces were torn off and withdrawn from in front and the stump freely cauterised with the hot iron. Throughout the operation there was remarkable freedom from hæmorrhage. The bone was then replaced and kept *in situ* by drilling the malar process and wiring it together with silver wire and connecting the incisor teeth in the same manner. The flap was sutured with alternating wire and catgut sutures, the soft palate being left untouched.

The man was placed in a separate ward, which was kept at a uniform temperature and carefully steamed at night. The tube was left in the trachea for the first twelve hours, and covered with a light bag of pine sawdust, purified with eucalyptol. At the end of this time it was removed, and a light bandage applied. Recovery was uninterrupted, and very rapid. The patient slept well and could take large quantities of liquid nourishment. Pulse of good quality, and the temperature never exceeded 100·5°. On the third day his condition was as follows:—Temperature 100°; pulse 90; wound entirely and soundly healed by first intention, with the exception of a small opening through the soft palate, and another at the point of exit of the wire through the malar bone; tracheal opening contracted to the size of a crowquill; moderate amount of inflammatory swelling about the right side of the face, but this rapidly disappeared. All the sutures were removed, and on the seventh day the man sat up in bed and ate soft solid food, being quite free from all symptoms of dyspnœa and dysphagia. The wire suture was removed on the tenth day, and in the following night he considered himself well enough to run away, a common practice with patients in this country. He was seen at work accidentally about a week afterwards.

*Remarks.*—The points of interest in connexion with this case are: 1. The large size of polypus. 2. The great help obtained during the operation by first performing tracheotomy. 3. The rapid recovery of the patient.

CASE 2. *Entire excision of the lower jaw for myeloid sarcoma.*—Mussamat Jhandi, a female Hindoo aged thirty-two, was admitted into Jullunder Dispensary on September 26th, 1884.

Her general health had been good; mother of several children, and is at present nursing one. Has had occasional attacks of intermittent fever, but not seriously. No history of syphilis. Her present illness commenced two years ago with a swelling about the central incisors of the lower jaw; very gradual at first, but much more rapid during the last three months. Has emaciated considerably of late, and especially since the protrusion of the growth between the lips (about two months). Can assign no cause, and has not had much pain, but suffers principally from the inconvenience arising from the position of the growth and the difficulty in masticating and speaking.

*Present state.*—A slightly made and much emaciated woman about thirty years of age. Temperature normal; pulse weak and small; respiration healthy. No disease present, with the exception of that in the lower jaw, which is the seat of a growth of a reddish colour, part of which protrudes between the lips. The protruded portion is the size of a large walnut, irregularly lobulated and ulcerated on the surface from constant exposure to air and dirt. The lips cannot be made to close over it. Internally the growth is found to involve the lower jaw, principally at its upper or dental margin, and to be of a soft, almost fungating nature, with the teeth embedded and lying quite loosely in it. The bone itself is felt to be considerably expanded in its upper half, the limits being on the right side beyond the last molar tooth, and on, up to, and including the first molar. The lower border of the bone is free, but behind the symphysis there is a nodule, about the shape and size of half a walnut, which appears to be springing from the bone. The whole growth is about the size of a small orange, and gives the jaw a peculiar pointed appearance. No enlargement of glands can be detected, nor are the superficial structures in any way involved. There is the greatest difficulty in eating anything, even liquids being taken with considerable effort, so that really the woman is being slowly starved. Speech is so much interfered with that her statement is made out with difficulty. She is extremely anxious for an operation to be performed.

She was kept quiet in hospital, and fed up as far as possible for twelve days, taking also small doses of quinine. During this time it was noticed that there was a decided increase in the size of the growth and its protrusion from the mouth.

*Operation.*—On Oct. 9th, under chloroform, laryngotomy was performed as a preliminary step in order to facilitate the main operation by obviating the risk of the respiration being impeded by the falling back of the tongue over the glottis, and also to facilitate the administration of chloroform. A ligature was then passed through the tip of the tongue, to retain command over it in case of any accident to the tube in the larynx. At this stage, owing to the failure of the heart's action, the pulse, which had been very bad throughout, ceased altogether, and artificial respiration

had to be performed for about ten minutes and a brandy enema given. On the restoration of animation, the administration of chloroform was continued through the tube. No further trouble was experienced on this score, the breathing and pulse continuing good throughout the remaining steps of the operation. An incision was made on the right side from a point three-quarters of an inch below and half an inch in front of the external auditory meatus along the lower border of the jaw to the median line. The facial artery was controlled and ligatured before any hæmorrhage took place. The bone was then cleared by means of a blunt periosteal scraper, the knife being entirely laid aside, except to divide the mucous membrane and, carefully guarded, to touch the capsule of the joint from in front. One small muscular branch in the substance of the masseter had to be ligatured, but no large vessel was injured, and the bone was entirely and cleanly cleared. Detaching the temporal muscle from the coronoid process was found to be the most troublesome part of the operation. The same process was gone through on the left side, the facial line being twisted, and no ligature was necessary. The bone was removed in its entirety, and was quite free from soft parts, with the exception of a small portion of the insertion of the internal pterygoid on the left side. Not more than an ounce and a half of blood was lost during the whole operation, which occupied an hour and a half. An enormous wound, seven inches in length, resulted, which was carefully closed by ten metallic and sixteen catgut sutures, the edges being painted over with compound tincture of benzoin. The tube was left in the larynx and covered with a light pad of carbolised sawdust. The following arrangements were made:—1. A separate ward and special service of attendants. 2. The nights being unusually cold for the season of the year, and the difference between the day and night temperature being marked, care was taken to maintain an equable temperature by means of fires and steaming the room between the hours of 5 P.M. and 9 A.M. 3. The tube was constantly protected with a light pad of sawdust and muslin bandage, and cleaned out with a feather occasionally. At the end of twenty-four hours it was changed, and on the fourth day removed altogether, the patient continuing to breathe through the opening. 4. A pint of milk and half an ounce of brandy were given every eight hours, and an enema of soup (four ounces) with brandy (half an ounce) each afternoon. 5. A solution of morphia (one drachm) was given night and morning.

The woman did remarkably well from the first. There was no shock, and with the exception of a moderate amount of pain, principally in the head, she was fairly comfortable. She slept a good deal day and night and took all the nourishment ordered by her own efforts for the first thirty-six hours; but after that, owing to the presence of inflammatory swelling and the fixing of the tongue to the floor of the mouth, she was fed through a tube passed to the back of the pharynx. The wound united firmly throughout by first intention and half the sutures were removed on the third day and the remainder on the fourth, when her condition was as follows:—Temperature 100·5°; pulse 110; respiration 28. Breathing quietly, and can lie in any position with comfort, and sit up. Is suckling her baby, and has insisted in doing so since twenty-four hours after the operation. Asked for semi-solid food and is picking up strength and flesh very rapidly. Can articulate when the laryngeal opening is closed with the finger. Tongue clean and bowels regular. There is only moderate discharge from the interior of the mouth and no facial paralysis. On Oct. 14th, or six days after the operation, the temperature rose to 102·5° and the respiration to 35. Patient complained of pain in the right axilla, but nothing could be detected on examination. A mustard plaster was ordered and greater precautions were taken to avoid chill. However, symptoms of acute pleuro-pneumonia of right side developed themselves, and the patient died on the eighth day of exhaustion. No doubt the woman, considering herself out of danger, had thrown off her clothing during the early part of the night and had caught a chill in the early morning, when the difference in temperature was most marked. Post-mortem examination was not allowed.

*Remarks.*—As in the previous case, the opening of the larynx as a preliminary measure was of the utmost service during the performance of the operation itself, and almost a necessity afterwards owing to the tendency of the tongue to fall back on the glottis. The remarkable freedom from hæmorrhage, and the fact that the facial nerve on both sides was uninjured, I attribute entirely to the use of a blunt scraper instead of a knife. It is evident from the rapid progress of the patient towards recovery that the cause of death was accidental, and I think it may be claimed that the operation itself was successful. I made no objection to the mother suckling her child, so long as she took and assimilated such large quantities of nourishment, for it is a common occurrence in this country to continue suckling after the most severe operations and injuries. Examination of the tumour showed it to be a myeloid sarcoma springing from the central portion of the maxilla, and involving the dental margin. I am indebted to Surgeon-Major P. Ramsay for his able assistance during the operation.

## CLINICAL STUDY OF THE LIVER VIEWED THROUGH THE URINE.

BY GEORGE OLIVER, M.D. LOND.

(*Concluded from p. 884.*)

*The systemic diffusion of bile salts from the portal organs is apparently not excessive, but the kidneys fail to keep pace with it.*—Hitherto I have dealt only with the reaction of the peptone test suggesting the presence of an increased quantity of the biliary salts in the urine; as in jaundice, diseases of the liver and spleen, fever, and in diseases in which the cellular elements of the blood undergo dissolution—such as some varieties of anæmia, scurvy, and hæmoglobinuria; the increase being absolute, even though the discharge of the biliary elements is at times lessened. Should any clinical value be attached to the renal elimination of bile salts when subnormal, or reduced to the verge of extinction? I am under the impression that a surcharge of these excreta in the blood may now and then take place from an imperfect removal of them by the kidneys, though there are no apparent indications of derangement or embarrassment of the portal organs to favour the accumulation. This is as yet, however, but little more than a surmise; and it may turn out that the detection of an excess of these biliary derivatives in the urine is the only important clinical aspect of the subject. A subnormal reaction is met with in many apparently healthy individuals, in whom perhaps the other emunctories, the skin and the bowels, are in this respect more active than usual, or in whom there is less biliary matter to be disposed of; also in a large proportion of those said to suffer from chronic biliousness, but who for their years probably make less bile than normal (subcholia), and in various forms of deficient constructive activity, as in ordinary anæmia and the like.

*Chronic renal disease.*—I have been rather struck with the fact that in all the cases of cirrhotic kidney I have examined the reaction was either decidedly subnormal or *nil*. But in a case of waxy kidney, which I observed from its origin to its close, the reaction was always above normal—often considerably so—and the post-mortem examination afforded no indications of uræmic poisoning, nor were any observed during life.[1] If this observation be confirmed by further inquiry, perhaps the question will arise how far should the symptoms of uræmia be referable to the grave form of cholæmia that culminates in convulsions and coma?

*Skin disease.*—So far I have always found the reaction subnormal in eczema. This is the urine of a patient now under observation, and the reduction amounts to at least one-half.

*Conditions that influence the renal elimination of the biliary salts.*—I think it is highly probable that neurotic influences frequently play a leading part in checking the discharge of these excreta by the kidneys; they are, however, often obscure and difficult to track. Hence the

[1] Just at this time I have under observation a young lady, aged twenty-one, suffering from intermittent albuminuria of hepatic origin, in whom I have noted the interesting fact that when there is not a trace of albumen (as is always the case in the urine discharged before breakfast) the amount of the bile salts as indicated by the peptone test merely reaches the normal standard; but when albumen appears (as it is apt to do in considerable quantity three or four hours after a meal) the proportion of the biliary elements rises considerably, becoming doubled or even trebled, and this at a time when they should appear in smaller quantity than in the morning. When after a meal there is no albumen, the bile salts are found in subnormal amount.

teaching value of experimental evidence, such as that lately brought forward by M. Vulpian, who applied electric stimulation to the white matter in the neighbourhood of the sigmoid gyrus, and on inserting cannulæ into the bile-duct and urethra found the flow of bile increased and that of the urine arrested, and the animal was seized with epileptic convulsions. This observation is probably of clinical interest in suggesting how a source of eccentric irritation—such as an undigested mass lodging in the stomach—may take the part of the electric current of the experiment and induce like effects. Then, again, some medicines increase the renal elimination of bile salts, while others appear to check it. The experiments of Feltz and Ritter showed that the preparations of antimony and arsenic augment the bile salts of the blood and the urine; and the mode of death in chronic poisoning by these metals is similar to that induced by the biliary salts—namely, cardiac asthenia and fatty degeneration. On the other hand, opium is probably a checking agent; and this remedy administered alone is, as a rule, a sort of touchstone with the cholæmic. If this be so, the clinical acumen of Graves, who prescribed antimony along with opium in the cerebral excitement of fever, shot ahead of experimental inquiry; and perhaps other corrective combinations, such as Dover's powder, which have received the sanction of experience, may be shown to rest on a basis of fact which accounts for their *raison d'être*.

*The degenerations of the cholæmic.*—I am disposed to conclude that fatty degeneration is a prominent pathological feature of cholæmia. This position was well illustrated by the post-mortem examination of a patient whom I recently saw in consultation with Dr. Johnson of Kirkby Overblow. Within a period of four months a woman, aged fifty, became extremely anæmic without obvious cause, and without presenting any distinctive indications of organic disease; a positive sign of mischief was, however, afforded by the urine, which, though generally rather high coloured, gave no reactions of bile pigment, but, according to the peptone test, always contained a large quantity of bile salts—never less than 300 per cent. increase. The post-mortem examination, however, did not reveal the cause of the anæmia; it merely indicated the existence of widespread and advanced fatty degeneration—e.g., of heart, liver, &c. The amount of blood was remarkably small, and no clots were observable. I obtained about half a teaspoonful from the chambers of the heart, and on submitting it to microscopic examination I readily detected numerous molecules of fat, varying in size from that of mere granules to the dimensions of the largest oil globules found in milk. This observation of the fattiness of the blood was corroborated by several medical friends. The corpuscles were mostly leucocytes.[3] In four days the cellular elements had almost entirely disappeared, and the oil globules were much more numerous.

*May not the continued discharge of an excess of bile salts by the kidneys favour or lead to the development of chronic renal disease?*—I have no facts to adduce in favour of this suspicion, and I can merely point to the parenchymatous degeneration of the kidneys induced in animals by the intravenous and subcutaneous injection of bile salts, as recorded by Leyden, Feltz, Ritter, and Brown; and to the interstitial renal changes observed in leucocythæmia and in chronic jaundice. In this connexion, perhaps, I should note that Nothnagel believes that renal tube casts are always to be found in the urine of jaundice when bile acids are eliminated by the kidneys, and that Dr. George Harley has observed both hyaline and granular casts in the form of albuminuria which he denominates "hepatic."

When this paper was sent to press I proposed to append to it an addendum, consisting of notes of some recent observations on decoctions of liver, spleen, mesenteric glands, &c.; but other work just now compels me to defer the publication of these data, which, however, merely form the basis of further inquiry to be resumed next winter.

[3] The small number of red discs, and these considerably deformed, was remarkable. Were they in great part dissolved during the thirty hours that intervened between death and the post-mortem inspection? I think it is quite possible, if not probable, that such an event may happen after death in the cholæmic, just as it has been observed to occur sometimes in hæmoglobinuric urine after emission.

THE statue of Pinel, given to the municipality of Paris by the Société Médico-Psychologique, and which has been placed in the Place de la Salpêtrière, will, it is stated, be formally unveiled on the 13th prox.

## A CASE OF CONVULSIONS DURING PREGNANCY TREATED BY INJECTIONS OF PILOCARPINE; RECOVERY.

By P. HORROCKS, M.D. LOND., B.Sc., M.R.C.P.

E. N——, aged twenty-four, was admitted into Guy's Hospital on March 7th of this year under my care. She had been married fifteen months, and had had one miscarriage before the third month, in June, 1884. Before marriage she was a servant, but since she has done only her own housework. She had never previously had any fit nor was there any tendency to fits in her relatives. Her father died of phthisis. Her own health has always been good. Her menstrual periods have been irregular, occurring at intervals varying from three weeks to two months. She is not quite sure when her last period occurred, but thinks it was in August, 1884, and believes herself to be seven months' pregnant. A week ago she began to have headache, which grew worse and occasionally she vomited. At 1 A.M. to-day (March 7th) she had a fit which lasted a few minutes, and after this at intervals of less than a quarter of an hour she continued to have fits throughout the day, each lasting from three to ten minutes. Ice-bags were applied to the head, and a purgative given which acted. No urine passed during the day. Dr. Faraker, who was attending the case, sent her up to Guy's, where she was admitted at 9·20 P.M. The face was much swollen, and the body and lower extremities œdematous, and some blood was issuing from the mouth, the tongue being severely bitten on the left side. A catheter was passed, but only a drop of urine came away in it. Vaginal examination appeared to bring on the fits. A gag was placed in the mouth to protect the tongue. There was much lividity. Two fits took place in the first half hour, the first being very severe, convulsing the whole body. Chloroform was administered, and it relieved the severity of the convulsions. A catheter was again passed, but no urine came away. At 10.5 P.M. a fourth fit came on during a vaginal examination. The fœtal heart was heard beating at the rate of 140 per minute. The patient has been quite unconscious since morning. At 11.30 P.M. a third of a grain of hydrochlorate of pilocarpine was injected subcutaneously, the patient being well wrapped up in hot blankets. In five minutes profuse sweating took place. At 12.10 A.M. (March 8th) another but much slighter fit came on. 2.15 A.M.: The sweating is nearly finished. She can be roused to some extent, but does not answer questions. A fourth of a grain of pilocarpine was injected, the patient resisting the puncture. Sweating began again in less than five minutes. Much of the lividity has disappeared. Temperature 101°; pulse 120, and less tense than it was. During the night the patient took some milk and brandy. She remained somewhat lethargic and did not speak in answer to questions, but put her tongue out when requested to do so. The left side of the tongue was bitten right through. At noon, and again at 5 P.M., a fourth of a grain of hydrochlorate of pilocarpine was injected hypodermically. Temperature normal; pulse 82. Five ounces of urine were drawn off; specific gravity 1020, acid, highly albuminous (nearly solid on boiling).—9th: No fits; temperature subnormal; took 23 oz. of milk; the tongue is in a very painful and swollen condition, the patient can scarcely speak for it; she is quite conscious. The mouth was washed out with a lotion of chlorinated soda.—10th: Bowels opened; urine passed normally; still albuminous.—11th: Urine acid; specific gravity 1015; albuminous.—12th: Passed 45 oz. of urine during the last twenty-four hours; less albumen.—13th: Colostrum in breasts. Fœtal heart sounds cannot be heard. Uterus seen to contract firmly at times; os patulous.—14th: Pain in abdomen; uterine contractions (?). Has complained of headache ever since she could speak.—15th: Albumen in urine is steadily diminishing in quantity. Still taking milk only.—16th: Labour pains set in, and a partly macerated dead fœtus was born at 4 P.M. The placenta was expressed after giving the patient chloroform, as she was too tender in the abdomen to allow it to be done without. Examination of the fœtus showed it to be between the sixth and seventh month. There was no ossific centre in the astragalus. An interesting point about the fœtus was that the testes were completely descended into the scrotum.

It is not necessary to detail the further progress of the

case. The patient made a rapid recovery, and left the hospital on March 28th with only a trace of albumen in the urine, a slight headache, and no œdema. She has been attending as an out-patient under my care since, and the last time she came up there was no albumen at all, and the headache had entirely disappeared. This is the only case that I have treated with pilocarpine, but the result was so immediate and so satisfactory that I thought it worth publishing. The patient had only one slight fit after the pilocarpine was commenced, and she seemed to improve rapidly. How it acted is less clear, but it seemed to me to relieve the system by causing the skin to take on the function of the kidneys vicariously.

Many believe that when convulsions come on during pregnancy the uterus should be emptied as speedily as possible. Others believe in venesection or anæsthetics, especially ether and chloroform. An interesting point in the present case is that the patient was relieved, and practically cured, of the convulsions without emptying the uterus. Labour did set in, however, a week later, apparently spontaneously. It may be that the fœtus died in utero during the convulsions, and that labour set in consequently; but pilocarpine has been used for the induction of labour by Marsman of St. Petersburg and Clay of Birmingham.[1] Hence it may be that the injection of this drug set up the uterine contractions, which resulted in premature birth. Dr. Fordyce Barker in 1879 condemned the use of pilocarpine in puerperal convulsions,[2] asserting that it produced continuous and exhausting depression. In Clay's case there was very alarming depression; but this was a case not of convulsions, but contraction of the pelvis, in which the drug was given to induce labour. In my own case there was no depression to cause any anxiety. Hence I think the drug deserves further trial in these very distressing and often fatal cases.

St. Thomas's-street, S.E.

## A COCAINE SPRAY PRODUCER.

By H. PERCY DUNN, F.R.C.S.,

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As the use of a spray producer undoubtedly commends itself in regard to the employment of cocaine in surgery, I have just devised an apparatus which, by the introduction of certain modifications upon the usual type, will be found to meet the requirements of the case in question.

In the first place, cocaine is a drug the universal use of which is somewhat curtailed by its expensive nature, consequently every drop of a cocaine solution has some significant value; further, the mission, so to speak, of cocaine when applied to a part is eminently a pacific one, and is in all respects different from the germ devastating, germ murdering objects of the gross carbolic spray, which with this purpose in view can be discharged over a wound with no inconsiderable velocity. Having therefore prefaced the description of the new spray producer by these remarks, the significance of the points to which I will now draw attention will be the more readily understood. From the accompanying illustration will be gathered the general appearance of the apparatus, and it is therefore only necessary to refer to its special features.

The spray producer is made of silver, and the jet is as fine as it has been possible to produce; it plays softly over a part without spluttering, and is so constructed as to act upon the eyeball without inconvenience to the patient; in the ordinary sprays the air contained in the reservoirs has only one means of exit—namely, through the jet. One of the results of this is the waste of some of the solution, inasmuch as the spray continues to act until the air is exhausted in the reservoir. In order to counteract the waste, which in the case of cocaine would represent something in the end worth saving, a small aperture has been made in the air-tube which while the spray is in use can be kept covered by the thumb. As soon, however, as the spray is no longer required the thumb is removed, the air at once escapes through the opening, and simultaneously the action of the jet is arrested. This contrivance obviates all dropping of the solution, and at the same time renders the spray exceedingly handy in the matter of regulating its action.

The cocaine spray has proved useful in all ophthalmic operations, and for all operations upon mucous membranes. In the removal of hæmorrhoids, for instance, the assistant could keep the part in an anæsthetic condition by an occasional spray while the surgeon without interruption carried out the various details of the operation. Again, in general surgery it might be equally useful; for instance, in herniotomy, ligature of arteries, and other operations of this nature. The difficulty, however, is to obviate the pain

of the first incision through the skin; but this having been overcome or ignored, a sufficiently strong solution of cocaine sprayed over the exposed surface of the subcutaneous tissue would render the operation painless throughout the rest of its course, and for this reason practicable without the employment of a general anæsthetic.

The spray producer can be procured of Messrs. C. Wright and Co., 108, New Bond-street, who have made it at my suggestion, and I am glad to be able to take this opportunity of thanking them for their assistance and for the trouble they have taken in the matter.

St. Stephen's-road, W.

[1] THE LANCET, 1879, vol. i. [2] The New York Medical Record.

## ON A CASE OF IDIOPATHIC TETANUS.

By OCTAVIAN N. ROYLE, M.D., F.R.C.S. ENG.

I WAS sent for at two o'clock on the morning of March 11th last to see the wife of the gravedigger of the parish of Grouville. The messenger upon inquiry informed me that she had been feeling ill for the last ten days with spasms and slight pains in the stomach, and that her bowels had been unrelieved for more than a week. Looking at the constipation as cause and effect—the night, moreover, a stormy one, and the house some distance from my residence,—I did not consider the nature of the attack one of sufficient urgency to pay a visit at that early hour, so sent her by the bearer a brisk purge of croton oil, with directions to foment the body well until I saw her. Calling at eight o'clock the same morning, the bowels, I found, had freely acted, but the pain and spasm associated therewith had much increased. I then for the first time recognised the nature of her case. The last day in February, it seems, this poor woman had become greatly alarmed at seeing the hand of a child placed on a machine for cutting turnips in motion, although with no injury to the child further than a slight graze of one finger. It was a clear case of idiopathic tetanus from nervous shock. The poor husband was in great grief and distress about his wife, whom I succeeded in calming by my assurance that she would soon be better; nevertheless, every day for more than a week after first seeing her the symptoms increased in severity. Trismus and opisthotonos at one time were well marked, the latter coming on after an interval of some hours, and lasting from

five to ten minutes, resisting apparently all treatment employed, first with opium, in two-grain doses every three hours for three consecutive days, then with chloral, in half-drachm doses every four hours for a like period, with very little improvement, and subsequently with one grain of morphia injected hypodermically every night with two of Indian hemp, repeated at short intervals during the day, the symptoms after this treatment gradually disappearing on the second day until her recovery, just three weeks after receiving the shock. The case, I think, of some interest and worthy of record; first, from the great impression made on the nervous system from so slight a cause; again, no marked symptom of the disease showing itself until the eleventh day after the fright, resisting at first all treatment; and lastly, succumbing to Indian hemp and morphia injections, a line of treament I should commence with most certainly if ever called upon to treat a similar case.

Grouville, Jersey.

# A Mirror
## OF
# HOSPITAL PRACTICE,
## BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

## UNIVERSITY COLLEGE HOSPITAL.

RENAL CALCULUS; NEPHRO-LITHOTOMY; CURE; REMARKS.

(Under the care of Mr. BERKELEY HILL.)

THE treatment of calculus of the kidney is well illustrated by the two cases which we publish this week. In the first case, where the symptoms had been noticed about seven months before operation, the renal structure had been so little altered by inflammatory changes that the organ was left after removal of the calculus. In the second, symptoms referred to the kidney had been present on and off for sixteen years, and extensive pyonephrosis induced by the presence of the calculus; for this the kidney was also removed. In each the result was satisfactory, and the cases form interesting contributions towards the surgery of the kidney, which has made such rapid advances during the last few years.

For the report of this case we are indebted to Mr. Bilton Pollard, B.S., surgical registrar.

E. R——, a woman aged forty, was admitted to the hospital on Oct. 28th, 1884. She stated that about three months previously she began to suffer from a gnawing pain in her right loin, which shot down to her right groin and knee; the pain came on suddenly, and was attended by vomiting. About a week later her urine was thick and red, but not, she thinks, due to blood. She passed urine frequently during both day and night; she never noticed any blood in it.

On admission the patient had occasional attacks of pain in her right groin and thigh; she had some tenderness in the right loin, but it was doubtful if any fulness was present there. Her urine was acid, had a specific gravity of 1080, and contained an abundant deposit of pus. She remained only three days at the hospital at that time, but she was readmitted four months later, and then stated that during the interval the attacks of pain had been more severe. Her urine was acid; it had a specific gravity of 1010, and contained a large quantity of pus, and on one occasion was dark-brown from mixture with blood. There was a slight fulness in the right loin, and during deep inspiration the kidney could be felt, and it was rather tender. From the persistence of the symptoms and absence of others connected with the bladder, Mr. Hill concluded that there was a calculus in the right kidney; and on March 11th, 1885, he exposed the kidney in the loin and punctured it in several places with a needle, but he did not strike a calculus. He next explored the surface of the kidney thoroughly with his finger and detected a hard substance at the lower part of the organ near the hilus; towards this point, guided by the position of the tip of his finger, he passed a knife through the kidney and struck the calculus. Finding it closely embedded in thick layers of fibrous tissue, he then enlarged the incision in the hilus of the kidney, and after freeing the calculus with a scoop, he extracted it with his finger. The wound was closed, except at the posterior part, where the drainage-tube was placed; carbolic gauze dressings were applied. During the first forty-eight hours after the operation the watery fluid, probably serous, not urinous, which drained from the wound was too great for the antiseptic dressings to retain. Notwithstanding this, the wound remained aseptic all through. About eight hours after the operation the patient passed three ounces and a half of urine per urethram; it contained pus. Nine hours later she passed an ounce and three-quarters of urine, which contained much less pus. During the first twenty-four hours after the operation the total amount of urine passed was only twelve ounces, which contained thirty-nine grains of urea; during the next twenty-four hours twenty-seven ounces of urine, containing 106 grains of urea, were passed. The quantity of urine excreted increased day by day until it reached forty-nine ounces, containing 364 grains of urea, during the sixth period of twenty-four hours. On the fourth day after the operation the pus entirely disappeared from the urine and remained absent for about six weeks, and then returned in slight amount. The patient had no return of the lumbar pain. She was discharged seven weeks after the operation; there was then a little pus in the urine, and the wound in the loin was almost healed. The calculus weighed 142 grains; it had an irregularly conical shape, and measured an inch across its base and along the two longest sides; the apex of the cone was smoothed off, and was represented by a flat facet, which seemed to indicate that it lay in the kidney against another calculus, but although this was carefully searched for at the time of the operation, it could not be detected. The patient was seen again on May 15th, when she was in generally good health. She said that she had felt pain in her right loin during that day for the first time; the wound had healed, and there was no fulness or tenderness there; her urine was turbid with flocculent pus.

*Remarks by* Mr. BERKELEY HILL.—The above case of nephro-lithotomy was very successful, though disappointing. It was successful in that a correct diagnosis of a renal calculus could be made on the presence of three symptoms—persistent pain in the loin, shooting thence towards the groin, the presence of pus in acid urine, and occasional slight hæmaturia at the onset of the case; successful also in that the calculus was found and removed without difficulty through an incision into a healthy kidney from the loin, with the effect of removing the symptoms from which the patient suffered. But the case is also disappointing in that after the urine had been free from pus for six weeks, and the pain in the loin relieved, there should be a return of the purulent discharge. It is difficult to explain this relapse, unless we conclude that there is still another calculus in the kidney, and this view is somewhat supported by the existence of a flattened surface on the irregularly shaped calculus which was removed. This flattened surface was observed at the time of the operation, and I searched very carefully for another calculus, but failed to detect one, and attributed the surface to the stone having been moulded in a calyx which fitted it closely. It is possible that so long as the wound in the loin remained open the pus discharged itself through that channel, and that when the wound closed the pus was obliged to find a vent along the ureter. Meanwhile the patient is enjoying a state of health and complete freedom from pain which she has not had for some years past.

## DUNEDIN HOSPITAL, NEW ZEALAND.

A CASE OF NEPHRECTOMY FOR CALCULOUS PYELITIS AND PYONEPHROSIS; CURE; REMARKS.

(Under the care of Dr. COLQUHOUN.)

THE notes of the following case are furnished by Mr. Christie, clinical clerk.

John C——, aged forty-four years, a shepherd, single, was admitted on Dec. 26th, 1884. He is a native of Inverness, Scotland, but had been in Otago for the last twenty years He came of a healthy family, and, excepting his urinary troubles, had always been a healthy man. About sixteen years ago he first felt pain in the left side, just below the ribs behind, and shooting towards the front. His urine was dark in colour and contained blood. These symptoms continued for about a year. He was then bled and took some medicine, and was free from pain afterwards for about two

years. The pain again becoming severe, he came to Dunedin, where a doctor told him that a calculus was passing down from his kidney to his bladder, and after some treatment the pain again ceased. Two years later he began to feel something turning in his bladder, and the urine was frequently suddenly stopped in micturition. Blood was passed occasionally, and he had several attacks of shivering. The urine then began to dribble away in small quantities when he tried to pass it. He came into Dunedin Hospital, and while there Dr. Hulme made an incision into the urethra in front of the membranous portion, and removed a small calculus. He left the hospital well, and was free from any severe pains for four years. He then again had pain in the left side and was "fevered," for which symptoms he was admitted into the Queenstown Hospital, where he stayed for about a week. Since then he has frequently had pain in the left side, worse on riding or after any exertion. His urine has contained a thick sediment for a good many months, he cannot tell exactly how long, and lately he has lost flesh and strength to a considerable extent. In November, 1884, the pain in the left side became severe and continuous, but he does not recollect having any sweating or shivering attacks.

*Present condition* (Jan. 13th).—The patient is a man of exceptionally good physique, but somewhat emaciated. He says he has lost at least two stone in weight within the last few months, and that he is much weaker than he has ever been. The lungs and heart are healthy. No abdominal tumour can be felt, but on deep pressure in the left hypochondriac region he complains of pain. There is no fulness in that region nor any notable increase of dulness. The pulse is quick and somewhat weak. The temperature is normal. He complains of constant dull aching pain in the region of the left kidney. The urine is faintly alkaline, contains phosphates, and there is a deposit of pus on standing to the extent of about a tenth of the total amount of urine. On the 15th there was little or no deposit in the urine examined. On the 18th, at noon, he had a severe and prolonged rigor, the temperature rising to 105°; the urine afterwards passed contained an abundance of pus, and was acid in reaction. For the next few days the temperature kept about 100° to 101°; on the 21st the urine contained no trace of pus, and was free from albumen. The bladder was examined with a sound, but was found to be normal. A consultation was held with the members of the hospital staff, and an exploratory incision in the left lumbar region was recommended, with the view of performing nephrectomy or nephro-lithotomy, according to circumstances. The condition of affairs was explained to the patient, who agreed to the operation. The amount of urine passed daily for five days before the operation was noted, and was as follows: Jan. 25th, 42 oz.; 26th, 35 oz.; 27th, 37 oz.; 28th, 35 oz.; 29th, 33 oz.

On the 24th the temperature was 101·4°, and it kept fluctuating daily, but there were no severe rigors.

*Operation* (29th).—The patient, being anæsthetised with ether, was placed on his right side with a pillow under his flank. An incision was made on the left side, parallel with the last rib and about an inch below it, extending from its anterior extremity to the outer border of the erector spinæ. The distance between the lower border of the centre of the rib and the crest of the ilium was two inches and a quarter. On cutting through the skin, muscles, and fascia, the lower end of the kidney was laid bare without difficulty. It was elastic and fluctuating, and an aspirating needle was inserted. About six ounces of thick pus were drawn off. The needle was then pushed in various directions, but no calculus could be felt. An incision was made into the kidney, and about eight or ten ounces of pus subsequently escaped. On passing the finger into the opening, the kidney could be felt to be sacculated and much enlarged; externally it was strongly adherent to surrounding parts in every direction. The kidney was with considerable difficulty separated from its attachments, and was pushed from the abdomen towards the wound. The external incision was increased anteriorly, the amount of space to be gained by a downward incision being so small that no attempt was made to increase the aperture in that direction. As it was not possible to withdraw the kidney whole, a stout hempen ligature was passed round the pedicle, and the lower half of the kidney was cut through and taken away. Considerable bleeding followed this, which was controlled by pressure with sponges and forceps. A large calculus could now be felt in the pelvis of the kidney, and two or three small pieces extending into the calyces were removed. The other part of the kidney was then removed, another ligature having been placed on the pedicle, which was drawn towards the edge of the wound. No attempt was made to ligature the ureter and vessels separately. Bleeding ceased after the second ligature. The wound was washed out with chloride of zinc solution, a large drainage-tube was put in, and the skin incision was closed with silver sutures. The operation was done under the spray. The kidney weighed twenty ounces and a quarter, and the calculus half an ounce.

30th.—The patient has passed a good night. To-day he says that the pain in his side is less than it was before the operation. In the twenty-four hours following the operation he passed thirty-five ounces of urine; that first passed contained a great deal of blood and some pus, the last being quite clear. Temperature (10.30 A.M.), 100°; pulse, 112.

31st.—10.30 A.M.: Temperature 103·2°; pulse 120. There is a good deal of oozing of sanious pus from the wound. In twenty-four hours he passed thirty-four ounces of urine, containing a copious deposit of phosphates, but free from pus or albumen. Henceforth no pus or albumen was present in the urine. During the first week the wound became very foul and septic symptoms set in. The tongue became brown and hard, the temperature reached 104·8°, and the pulse was as high as 150. Charcoal poultices were applied, and the wound was freely irrigated with warm carbolic solution (1 in 40). The abdomen remained soft and free from pain. On February 9th the wound was again healthy and clean, the temperature being 99°; from that time convalescence was steady, and healing went on rapidly. The patient was able to get out of bed on February 28th.

On March 20th the ligatures had not yet come away from the pedicle, but with the exception of the small sinus thus left the wound had entirely healed, and the patient was gaining flesh and strength daily. From fifty to fifty-six ounces of urine were passed daily. During the first week, while the wound was septic, a bed-sore formed over the right sacral region, which gave rise to a good deal of trouble and discomfort, but which was healing rapidly.

When examined on April 10th the patient was in excellent health.

*Remarks by* Dr. COLQUHOUN.—The diagnosis of this case presented no particular points of difficulty. The previous history of calculus, the absence of cystitis, the occasional acidity of the urine, the appearance and disappearance of pus, and the pain in the region of the left kidney, all indicated that the left kidney was the source of the pus, and that it was probably due to the presence of a calculus. The next question that arose was as to the condition of the right kidney. The absence of albumen, when pus was not present, was considered to be satisfactory on that point, and it was thought to be very probable that the right kidney was, and had been for some time, doing the main part of the work, and that little extra burden would be thrown on it by removing its diseased fellow. The age of the patient made the operation a serious one, considering the mortality that had followed such operations in patients of middle life. Mr. Barker stated at the Congress of 1881 that out of ten cases of nephrectomy for calculus collected by him, seven had died, and all the recoveries had been in patients under twenty-four years of age. In this case, however, the peculiarly good physique of the man, the absence of any constitutional weakness, and a previous life of strict temperance in a healthy climate, made the patient a good subject for operation in spite of his years. An operation under such circumstances certainly seemed more likely to be successful than in many of the cases of nephrectomy for strumous disease performed on unhealthy and cachectic individuals many years younger. The lumbar incision was chosen in preference to the abdominal, and no regret was felt for this, notwithstanding the difficulty experienced in removing the kidney through a comparatively small aperture. The condition of the kidney bore a strong resemblance to that of a phthisical lung strongly bound down by pleuritic adhesions, it was so strongly adherent to all the surrounding tissues; and there would have been considerable danger of some of the fetid pus escaping into the cavity of the abdomen had the incision been made from the front. The treatment after the operation was mainly directed to keeping the wound clean and to maintaining the strength of the patient. He rallied quickly from the shock of the operation. During the few days of septic trouble brandy was freely given. The bowels were somewhat constipated throughout, but this the patient said was not more than was

his habit when he was at work. The calculus externally consisted of phosphates, with no trace of uric acid; no examination of its internal composition has yet been made.

## GREENOCK INFIRMARY.

### PENETRATING WOUND OF ABDOMEN, WITH PROTRUSION OF STOMACH AND INTESTINES; REDUCTION OF HERNIA AFTER ENLARGEMENT OF WOUND; DEATH.

(Under the care of Dr. DOUGLAS.)

THOMAS C——, aged eight, was admitted on April 18th, 1885. This boy, when bathing in a shallow burn, lay down on his belly close to the bank in order to practise swimming movements. The ragged edge of a broken bottle which lay at the bottom of the burn penetrated his abdominal wall. Saying nothing about his injury, he at once got out of the water, walked to his clothes, put on his shirt and one leg of his trousers, but his exertions caused his intestines to protrude through the wound, and this being observed by his companions, assistance was sent for, and he was at once brought to the infirmary in the ambulance van, being admitted about an hour and a half after the accident.

On admission, midway between the umbilicus and the ensiform cartilage, in the median line, was an incised wound only three-quarters of an inch long, through which had protruded the stomach, omentum, and almost the entire length of the jejunum and ileum. These viscera now lay to the right of the middle line. The stomach and intestines were uninjured, although considerably congested and distended with flatus; the peritoneum covering them was smooth and glistening, and no dirt or foreign body of any kind was adherent. The omentum was slightly torn here and there, and at one part a very small portion of it was almost detached. The neck of the hernial protrusion was firmly constricted by the edges of the wound. The surface of the patient's body was cold, his face pale and anxious-looking, and the pulse slow and feeble. Chloroform was administered, the viscera carefully washed with a weak tepid solution of carbolic acid, and the semi-detached portion of the omentum firmly ligatured with carbolised catgut and removed. Careful attempts were then made to return the hernia, but, as was expected, they proved of no avail, so the wound was enlarged upwards and downwards about half an inch in each direction, and the whole protrusion was then returned with comparative ease. The edges of the wound were stitched accurately together with sulpho-chromic gut, a drainage-tube inserted at the lower end, and a dressing of protective carbolic gauze and carbolised wool applied. The carbolic spray was employed during the operation. He was ordered small quantities of brandy and iced milk.

19th.—Slept fairly well during the night; micturated freely; complained of no pain; pulse rapid and feeble. Temperature in rectum 100·8°. The following was ordered: solution of morphia and simple syrup two drachms of each, distilled water two ounces; one drachm every two hours. Incessant vomiting and hiccough began shortly after mid-day; he gradually sank, and died at 9.30 P.M., thirty-two hours after admission.

The wound was reopened and enlarged after death. No hæmorrhage had taken place; no peritonitis; the viscera had exactly the same appearance as before their return into the abdominal cavity. There was no attempt at healing of the wound.

# Medical Societies.

## ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

*Fatty Tumours.—Lympho-sarcoma of Tongue.*

THE last meeting of the session of this Society was held on Tuesday last, Dr. George Johnson, F.R.S., President, in the chair. At the close of the meeting the President said that the ventilation of the room in which the Society met would undergo a thorough revolution during the vacation.

Mr. BLAND SUTTON read a paper on Fatty Tumours, the object of which was to endeavour to point out the probable origin of certain forms of fatty tumours which occur in unusual situations. The author removed the biceps cubiti muscle of an old woman, a dissecting-room subject, the upper part of which had become metamorphosed into a lobulated fatty tumour; it was not merely an example of fatty degeneration of a disused muscle, but a genuine lipoma. Mr. Pearce Gould removed a congenital fatty tumour from the clavicle of a child, the base of which contained striated muscle fibre. Mr. Butlin reported a similar case in the twenty-eighth volume of the Pathological Society's Transactions. The patient, a girl seven years old, was operated on by Mr. T. Smith for a fatty tumour growing among the deep muscles of the calf. It contained striated muscle fibre. In a fibro-muscular tumour of the uterus, removed by Sir J. Paget, and reported in the twelfth volume of the same Society's Transactions by Mr. T. Smith, a fatty tumour was found of the size of a pigeon's egg. These four cases seem to favour the view that the muscle-tissue had suffered fatty degeneration, and the retrograded elements had acquired, or assumed, an independence and grown into a tumour. Muscles do not stand alone in this respect. Inflammatory new formations may degenerate into fat and become veritable fatty tumours. Dr. Norman Moore presented to the College of Surgeons Museum a ureter surrounded by a "fatty tumour." The ureter contains a calculus, and in the catalogue is printed the following noteworthy explanation: "The fat was probably produced by fatty degeneration of newly formed fibrous tissue (inflammatory new formation) occasioned by irritation of the calculus." The museum of the Middlesex Hospital contains a specimen illustrating syphilitic stricture of the rectum; the pelvic organs are embedded in a mass of fat, tunnelled with sinuses from the bowel. Possibly the stricture and the passage of fæcal matter outside the bowel had acted as irritants, leading to increased activity in the parts surrounding the gut, which fell just short of inflammation and led to overgrowth of fat, or in the early stage of the stricture inflammatory products were exuded, which later retrograded into fat and took on independent growth. Dr. J. K. Fowler pointed out the condition to the author, and stated that it occurs in many cases of long-standing stricture of the rectum. In November, 1876, Mr. Henry Morris removed from the buttock of a man a fatty tumour containing a shapeless mass of bone. Careful examination of this and similar tumours, particularly a case described in the thirty-third volume of the Pathological Society's Transactions by Mr. F. Treves, lends support to the notion that congenital fatty tumours containing bone are really examples of "parasitic fœtuses whose soft parts have retrograded wholly or partially into fat." The question is also borne out by numerous examples in pathology and comparative anatomy. The fatty contents of dermoid cysts may be explained in the same way—viz., degeneration of the higher tissues of which it was originally composed. The "lipoma arborescens" of Müller doubtless arises by fatty retrogression of the villous processes, which are so common in joints affected with chronic disease. Evidence in many ways is adduced in the paper to prove that any of the soft tissues of the body, normal or pathological, may degenerate into fat, and that this retrograded tissue does, in some instances, assume an autonomy and grow into a veritable fatty tumour. — Mr. BUTLIN said that, working at lipomata of infancy and childhood some years ago, he had come to the conclusion that they might arise as degeneration of fibrous tissue. He thought that Mr. Sutton had extended these views, and with a considerable show of truth.—Dr. CREIGHTON considered that Mr. Sutton had hardly proved his point. He said that the notion that such congenital fatty tumours were parasitic fœtuses was far-fetched. In dermoid cysts no doubt there was a greasy substance; but this was due to the existence of an enormous number of sebaceous glands. Throughout the paper fat was spoken of as degenerate tissue, and Dr. Creighton objected to such a view. The paper did not state where the fat occurred precisely in the tumour of the biceps cubiti muscle, and there was no histological description. He believed that it was just as likely that we had to do with a congenital rudiment of fat in cases of congenital fatty tumour. When fat forms in the intestine, in the tract of an old hernia, he had found that the fatty change proceeded in the most orderly way, and without preceding inflammation.—Mr. BLAND SUTTON, in reply, argued that fœtuses did remain at their autosite, and gave several illustrations: one, that of a rudimentary fœtus on a man aged thirty, in which the fœtus moved its stunted and rudimentary limbs; and another case in which the fœtus was attached to the breast. The fatty material in dermoid cysts

was no doubt of two kinds: the one was a fluid sebum; the other was unquestionably fat and a genuine adipose tissue. His paper was simply an earnest endeavour to give some satisfactory explanation as to how fatty tumours may arise in such untoward situations in which we sometimes find them.

Mr. JONATHAN HUTCHINSON read a paper on a case of large Lympho-sarcomatous Tumour of the Tongue. The paper consisted chiefly in the narrative of a case in which a tumour, beginning in early life in the substance of the tongue, had required removal on account of its large size. It had grown until it completely filled the mouth and obstructed deglutition and respiration. It weighed after removal seven ounces, being probably the largest tumour of the tongue on record. The operation necessitated a preliminary tracheotomy and section of the lower jaw at the symphysis, since it was quite impossible to get at the mass from the mouth. The patient was a medical student, aged twenty-two, and the tumour had been growing for twelve years, or possibly much longer; it was painless and of almost stony hardness. Its surface at one part was covered with papillary outgrowths, but there was not the least tendency to ulceration. There was no gland disease. The patient was in good health, and the inconvenience caused by the size of the tumour was the only reason for its removal. Careful microscopic examination had been made by Mr. Eve, Dr. Klein, and others, with the result that the tumour was declared to be of a sarcomatous or lympho-sarcomatous nature. This verdict had unfortunately been supported by the final result, for after about two years of good health, without the slightest symptom of recurrence, a new growth suddenly developed in the scar, and, increasing very rapidly, brought about the patient's death. The author, whilst admitting that the tumour in its final development was of a malignant or sarcomatous character, drew attention to certain clinical features which were different from those common to such growths. If not actually congenital, it had begun in very early life, and its growth had been very slow and absolutely painless. The development of coarse papillæ on its surface, without any tendency to ulcerate or fungate, was another feature of peculiarity. He had not been able to find on record any case which corresponded with his own in all its characters, but had met with several which resembled it in its early stages. In one of these, in which a portrait was shown, the appearances on the surface were exactly similar; but in this no tendency to persistent growth was shown, and the patient, a railway porter, aged twenty-three, is still free from any material inconvenience. This and some other cases led the author to believe that the starting-point had been of the nature of a congenital mole, in which other morbid tendencies had been developed later on. The paper was illustrated by a series of drawings, and by the preparation itself, which had been preserved in the museum of the College of Surgeons.—Dr. JOHNSON congratulated Mr. Hutchinson on the temporary success which had attended the surgical interference.

Mr. HUTCHINSON showed a living specimen of Papillary and Nævoid Mole of the Tongue in a railway porter. There was hypertrophy of one-half of the tongue with, in addition, papillary growths all over the organ and enlarged veins. The growth had certainly diminished during the last year or so.—Mr. BUTLIN had investigated the literature of the subject of sarcoma of the tongue, and so far as he could make out there was but one on record besides that related by Mr. Holmes. He thought that Mr. Hutchinson was probably right in believing that the growth had arisen in some other tissue. It was not an ordinary round-celled sarcoma, and Mr. Hutchinson's view as to the origin must be accepted. He remembered the case of a little girl under the care of Mr. Howard Marsh, in which there was a papillary growth on the tongue and the disease spread through that organ. Certainly Mr. Bryant had shown that such growths might be due to the degeneration of a nævus, for Mr. Bryant saw one case pass through the various stages. If a further proof of the nævoid character were wanted, it would be found in the profuse bleeding, which was with much difficulty controlled in one case operated on by Mr. Butlin. Mr. Hutchinson's case was most probably one of a congenital condition of the tongue which had undergone cystic and papillary degeneration, and in this degenerated tissue a sarcoma had developed. The case was one of surpassing interest.—Mr. HOWARD MARSH said that he had seen three cases of a nævoid condition of the tongue at the Hospital for Sick Children. In two of these the patients were about three months old. It was interesting to know that such nævi did take on a coarse papillary degeneration.—Mr. BARKER had seen one more case than those he had put on record—that of a young woman aged twenty-one, in whom there appeared to be a rather larger admixture of the nævoid condition than existed in Mr. Hutchinson's case. The papillæ appeared to be made up of saccules, which, on incision, gave vent to serous fluid. A lymphangiectatic condition was probably also present in these cases. Injection could be performed from the lymphatics into the veins, and *vice versâ*. Setons had been used, with the result of setting up glossitis; and an incision into the inflamed area did not give rise to much bleeding, though there was a considerable escape of a clear fluid.—Mr. HUTCHINSON did not accept the limitation of the tumour to the class of nævus only; he considered that there was the "mole" element—that is, a hypertrophy of the various tissues. Mr. Arnott had described enlargement of the lymphatics, as well as all the other tissues, in a case of the kind. He did not think that such cases always began as a nævus. In many cases there was hypertrophy of all the solid tissues.

## OPHTHALMOLOGICAL SOCIETY.

*Congenital Changes in Vitreous Body.—"Black" Cataract.—Nævoid Conditions of Eyelids and Orbital Tissues.—Intraocular Gumma.—Double Retinal Glioma.*

AN ordinary meeting of this Society was held on the 4th inst., Mr. H. Power, F.R.C.S., Vice-President, in the chair.

Mr. LANG showed a specimen of Congenital Changes in the Vitreous Humour with choroiditis and atrophy of the optic disc.—Mr. H. POWER asked for what reasons the changes were considered to be congenital.—Mr. H. E. JULER suggested that there had been an inflammatory process which had left behind it the fibroid changes; the lesions were not the remains of the hyaloid artery.—Mr. LANG said that the sight of the right eye had always been defective; the left eye was normal. By direct inspection three branches could be seen, one of which passed vertically upwards and another horizontally inwards; he thought it could not be the remains of an artery, and suggested that an intra-uterine inflammation was the cause; there was also choroiditis of extensive nature; the optic disc was decidedly grey, and much darker than in ordinary grey atrophy. In answer to Mr. Power, he said there was no specific history.

Mr. H. POWER showed a specimen of "Black" Cataract, which was the only one that had occurred in his own practice. Mr. Myrtle, at the Western Ophthalmic Hospital, had informed him that he had seen three black cataracts in Paris during a period of six months. Mr. Power's case was that of a woman aged forty-three, in whom the field of vision was good in all directions, though feeble. The lens was removed without iridectomy, and the cataract came away in the capsule. The result would in all probability be very good.—Mr. SWANZY had seen many black cataracts both in von Graefe's and his own practice. The result of their extraction was rather unsatisfactory in his experience.—Mr. LANG referred to two cases which had been under his care. In one there was extensive myopia and mixed astigmatism; the patient did well for a time, but subsequently detachments of retina came on and useful vision was destroyed. He had seen another case at Moorfields also in a myopic patient.—Mr. JULER remarked on the large size of the lens in Mr. Power's case, and thought that the eye ought to have been glaucomatous were it not for the myopia.—Mr. NETTLESHIP had seen many cataracts of a brown tint, but none actually black; he referred to Mr. McHardy's case, published in the second volume of the Society's Transactions.—Mr. MACKINLAY had seen a few cases of black cataract.—Mr. ADAMS FROST remarked on the obscure nature of black cataracts.—Mr. HENRY POWER suggested that absorption of hæmoglobin might account for the colour, and thought a chemical examination might clear up this point.

Mr. MCHARDY showed a girl with a Subcutaneous Nævoid Condition of the Eyelids, which was attended with alterations in the temporal bones. There was no proptosis; the eyeball appeared to be unaffected.—Mr. SPENCER WATSON referred to a case of nævus of the orbit, orbital tissues, and upper lid, which did not extend so far into the temporal

region as in Mr. McHardy's case. He had used ligatures to tie portions of the growth in the lids and the actual cautery for the orbital portions; by these means he had obtained a good result. He thought Mr. McHardy's case not so favourable for operation, and yet he suggested that some of the vessels might be tied up.—Mr. H. POWER had seen many cases of nævus of the eyelids, and referred especially to the case of a child aged between three and four years, in which he had twice used a deep figure-of-8 ligature, with success at the second operation. He mentioned another case in which a nævus was rapidly growing at the inner canthus and caruncle of the eye and had penetrated into the orbit; this was in a female infant aged eight months. He dissected out the growth with some difficulty after separating it from the conjunctiva; there was some hæmorrhage, and the operation had to be more extensive than he had anticipated.—Mr. NETTLESHIP referred to a case of "lymphatic" nævus in a boy, in whom there was defective vision; nothing was done; an attack of spontaneous inflammation led to no improvement. He considered that Mr. McHardy's case was one of nævus; large cords passed through the growth, which were apparently obliterated vessels.—Mr. JESSOP referred to the enlarged veins and cords passing apparently into the external jugular veins.—Mr. WARREN TAY asked whether the choroid was affected.—Mr. MCHARDY said that the choroid was probably free; there was some hypermetropia about 2 D. The growth did not dip into the orbit very much, for there was no exophthalmos. He mentioned a case in a boy aged fifteen, in whom proptosis was a marked feature; he thought he should deal first with the isolated mass in the lower lid, and then proceed to remove a portion from the upper eyelid.—Mr. ADAMS FROST referred to a case on which he had operated, and said that the skin never resumed its natural texture; in this case the tumour went deeply into the orbital tissues.

Mr. JESSOP read the report of the Committee on Mr. Benson's case of Growths on the Cornea and Iris. It was found that the nodules on the cornea were chiefly situated external to the posterior elastic lamina. The nodules consisted of round nucleated cells, which stained deeply; in some spots there were signs of disintegration. There was practically no caseation. No giant cells were found anywhere. No reticulated structure and no bacilli were detected. The growths in the inoculated animals had the same characters. This was not a case of tuberculosis, as the above facts showed, and as was further borne out by the fact that there was no evidence of general tuberculosis in rabbits inoculated into the anterior chamber of the eye.—Mr. SWANZY asked the Committee what kind of growth they regarded it as.—Mr. JESSOP, in reply, said some form of granuloma, possibly syphilitic.

Mr. SPENCER WATSON read a paper on a case of Intra-ocular Gumma in a child aged six years, whose history pointed to inherited syphilis. The father was the subject of phthisis. The patient came to the South London Ophthalmic Hospital with a protrusion of the upper and outer quadrant of the sclerotic. This was punctured, and on it, though no pus escaped, a prominent growth of lympho-pus formed. The earlier stages had resembled those of acute onyx with hypopion, but after the formation of the protrusion in the sclerotic the pus in the pupillary area disappeared. Under a course of mercury the protrusion subsided, leaving a pigmented scar in its place, and a shrunken eyeball. All the other symptoms also were ameliorated, and the child's general health improved. The whole case seemed to indicate an intr-ocular syphiloma. At one time the sympathetic irritation of the sound eye threatened danger to it also, but the mercurial course had a good influence, and, as the damaged eye contracted, the fellow eye lost all irritability and the general health correspondingly improved. This form of syphilitic affection of the eye is, according to the author's experience, very uncommon.—Mr. ADAMS FROST referred to a case of gumma on the anterior surface of the iris which was absorbed under mercurial treatment; the other eye was symmetrically affected.—Dr. BRAILEY referred to cases of gumma of the choroid which he had seen, none of a large size. He mentioned cases of tubercle, in one of which the sclerotic was perforated and a suppurative panophthalmitis resulted. In a case of glioma with increased tension a tuberculous mass growing from the optic disc was found. He thought there was evidence to show that genuine glioma does shrink.—Mr. NETTLESHIP had not seen intra-ocular gumma in a child, but had seen many in adults, where there was no doubt as to the acquired syphilis. He remembered very well two cases in women with severe secondary syphilis, and each lost one eye. In one the disease led to the formation of a bulging mass in the ciliary region, which tended to perforate and was broken down in the centre. In another case in a lad it was doubtful whether the growth was syphilitic, tubercular, or of some other nature.—Mr. LANG spoke of a case in a man with acquired syphilis; the gumma was situated on the anterior surface of the iris and perforated the sclerotic. In another instance the gumma separated the iris from the sclero-corneal junction and bulged the sclerotic forwards.—Mr. POWER said that it was the early age of the patient which was the interest of Mr. Spencer Watson's case. In adults syphilitic affections of the iris were very common, especially at Chatham, where, the Contagious Diseases Acts not being in force, he had seen numerous examples.—Mr. SPENCER WATSON said that the mother showed no evidence of syphilis till after the birth of the child; and he suggested that the fœtus was primarily affected, and that the mother was infected from the fœtus.

Dr. BRAILEY described a case of Double Retinal Glioma, which resulted in the shrinking of one eye and the perforation of the anterior part of the opposite eye by a large projecting mass of new growth. He first saw the child, who is still living, in October, 1882, when there appeared at the fundus of the left eye a yellowish-red vascular reflex. The right also showed a greyish reflex, with a few vessels on it. The disease was diagnosed as glioma, the condition being more advanced in the left eye, where it implicated the entire retinal thickness, and of comparatively short duration in the other, where it was apparently confined to the external retinal layers (glioma exophytum). In the diagnosis of glioma Mr. Vernon concurred. The disease progressed slowly for ten months, when the right eye was apparently the seat of an acute suppurative panophthalmitis, during the progress of which the child lay for several days in a state of stupor. Dr. Brock of Tooting, under whose care she was, attributed this condition to meningitis. Two and a half years from the time of her being first seen the tumour perforated the left eye and projected for about three-quarters of an inch as a rounded mass, about half an inch in diameter, from between the lids. There was at present no evidence of any further extension of the disease. Dr. Brailey thought that the points of interest in the case were its long duration, and the fact that an intra-ocular glioma could shrink and become inert. He referred to such a case recorded by Mr. Snell in the Society's Transactions for 1884, to which he had himself appended another; but in neither of these did the shrinking appear to be the result of a suppurative panophthalmitis. Another point of interest was the probable mode of extension of the disease from one eye to the other. He thought that this, in some cases, at all events, was by the optic nerves and chiasma. — Mr. POWER had seen but one case of glioma in both eyes; in this case, and against his wish, no operation was performed, and the child died in great misery. — Mr. MCHARDY spoke of a case of double glioma in which one eye was removed, but the parents refused to have the other touched. The growth at death weighed 8½ lb., and the child only 24 lb.—Mr. FRANCIS MASON also spoke of a case of double glioma. One eye was removed, and the further growth in the orbit of that side certainly shrank, whilst the glioma of the other eye went on enlarging.—Mr. ADAMS FROST thought that, as the growth extended along the optic nerves, removal would prove useless in established cases.—Mr. SWANZY spoke of a case of double glioma which had not extended from one eye to the other, but had appeared independently in each eye. He mentioned a case in which the glioma lasted two years before the disease became extra-ocular, and agreed with Dr. Brailey that gliomata were not always rapid in their growth.—Mr. POWER thought it would be important to know whether early removal prevented recurrence in other organs.—Mr. NETTLESHIP referred to a case in which he had removed the eye at an early period and no recurrence had taken place after three years, and Mr. Brudenell Carter had put on record a case in which certainly eight years elapsed without recurrence.—Dr. BRAILEY had seen altogether twenty cases of ordinary glioma, five of which recovered after excision.—Mr. LANG gave an instance showing that growth may occur in the second eye without extension by the optic nerve.—Mr. WARREN TAY referred to a case, probably a glioma, in which there had been no recurrence after eight years.

## HARVEIAN SOCIETY OF LONDON.

AT the meeting on May 7th, the President, Dr. T. Morton, in the chair,

Dr. M. HANDFIELD JONES read the notes of a case of Porro's Operation. The patient, a single woman, aged thirty, had come to him complaining of a lump in her abdomen; about four months previously she had had an acute attack of pelvic pain, following violent exertion, and accompanied with constipation and great frequency of micturition. Since the attack her courses had stopped, constipation had been very troublesome, and the general health had deteriorated. Physical examination revealed the existence of pregnancy, complicated by a large fibroid tumour impacted in the pelvis, and leaving only a small chink between its anterior surface and the symphysis pubis. At the time of labour it had been found possible to dislodge the tumour under an anæsthetic to such a degree that the performance of craniotomy was deemed advisable; this however failing, the abdomen was opened and the child removed by uterine incision. Then the tumour, being freed from adhesions which bound it to the pelvic wall, was raised out of the pelvis and removed with the uterus. The patient rallied well from the operation, but succumbed on the third day from peritonitis.

Dr. DE WATTEVILLE read a paper on Electrical Diagnosis in Nervous Diseases. After showing some of the recent improvements effected in electro-therapeutic instruments, he spoke of the method of conducting an investigation of the reactions of nerves and muscles. He then dwelt at some length on the phenomena observed in various forms of facial paralysis. Ordinary facial paralysis from "cold" offers three types of intensity; and an accurate prognosis may often be based upon the results of an electrical investigation; and recovery may be predicted within one, two, or six months respectively. He then explained the relationships between the "reaction of degeneration" and the morbid changes in the nerves and muscles; and he pointed out how the latter depended upon an interference with the "trophic" influence of the motor nuclei. The division of paralyses into "cerebral" and "spinal" (Marshall Hall) is of value if, by these terms, we denote the fact that in some the muscles are cut off from the brain influence only; while in the others the spinal (trophic) influence is also cut off. Progressive muscular atrophy, poliomyelitis, and "wrist drop" from lead or from pressure on the musculo-spiral nerve, were briefly alluded to as offering many opportunities for clearing up doubtful points and framing a prognosis by means of an accurate investigation of the behaviour of nerves and muscles to faradism and to galvanism.

## ACADEMY OF MEDICINE IN IRELAND.

AT a meeting of the Obstetrical Section on March 6th,

Dr. MORE MADDEN exhibited Five Uterine Tumours which he had recently removed from patients in the Mater Misericordiæ Hospital, and read a paper on the Treatment of Uterine Fibro-myomata, as exemplified in his own gynæcological hospital practice during the past fifteen years. In this communication the author described fully his method of removing uterine fibromata by enucleation, and also referred to Emmet's operation for the same purpose, as well as to the treatment of uterine tumours by abdominal hysterectomy, myotomy, and oöphorectomy.—Dr. KIDD agreed with Dr. More Madden that the prevailing epidemic of laparotomies needed to be stayed. Capital operations should only be performed when the risk to life was imminent. The treatment required would vary with the size of the tumour—submucous, interstitial, or subserous. If necessary, the first two classes of uterine myomata might be removed by enucleation. The submucous variety caused most trouble and danger to life through accompanying hæmorrhages, but interstitial tumours might grow towards the mucous surface, and so become practically submucous. In the same way these tumours might become subserous. The latter class very seldom gave rise to really threatening symptoms such as alone would justify serious operations being undertaken for their removal. Mere inconvenience and some amount of pain would not justify laparotomy. Serious difficulty in defecation rarely occurred in connexion with these tumours, but micturition might be so difficult as to call for the use of a catheter. He had generally found it possible to relieve such symptoms by lifting the tumour out of the pelvis. He knew many cases in which very large uterine tumours had existed for many years without giving rise to any real danger to life, even though the abdominal and thoracic viscera were much pressed upon and displaced.—Dr. MACAN said that everyone would agree that in the absence of proper indications serious operations should not be undertaken. This rule was obvious; but enucleation as an operation he regarded as infinitely more dangerous than laparotomy. Nor did he accept Dr. More Madden's faith in the efficacy of subcutaneous injections of ergotin. Schroeder had laid down very clear rules and indications for the performance of myomotomy. It was called for in the case of a rapidly growing tumour in a young woman, when it gave rise to symptoms from mechanical pressure or excessive bleeding, or when it interfered with the patient's power of earning her bread. Other indications sometimes requiring operative interference were, according to Schroeder, complication with ascites or with pregnancy. Another rarer indication consisted in evidences of sloughing of the tumour. Removal of the ovaries might in many cases be preferable to myomotomy, but Battey's operation was very difficult and sometimes almost impossible in the cases of large tumours. It would be erroneous to say that menopause held out certain prospects of the cessation of the growth of uterine tumours.—Dr. BYRNE thought that the dangers of uterine tumours complicating pregnancy had been overrated. He believed with Dr. Kidd that the more serious operations were very seldom required.—The PRESIDENT pointed out that all of the tumours presented by Dr. More Madden except one were intra-uterine and pedunculated. He entirely differed from Dr. Madden in his estimate of the difficulties and dangers of enucleation. More difficult and less successful operations he had never performed. In his experience enucleation was most often left unfinished. He had some time since made up his mind never again to attempt this operation, except upon examining the uterus he found the tumour so circumstanced as to lead him to think that it would come away very easily. Myomotomy he looked on as a very dangerous operation, and not to be undertaken without the clearest indications. Death from pressure or from bleeding was very exceptional in these cases. He had entirely lost faith in subcutaneous injections of ergotin. It could only be of possible use in the case of intramural tumours. He had lately practised incision over the tumour, with subsequent injections of iodised phenol into the cavity of the uterus at fortnightly intervals, with very distinct advantage.—Dr. PUREFOY having spoken, Dr. MORE MADDEN replied, and the Section adjourned.

## SHEFFIELD MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of the Society on April 23rd,

Mr. ATKIN showed microscopical specimens of a Calcified Enchondroma of the Cerebellum which was accidentally discovered during the post-mortem examination of a boy who died of meningitis following otorrhœa.

Mr. F. WOOLHOUSE related particulars of a case of Hysterectomy in which a large uterine fibroid was removed with the body of the uterus and appendages. The patient, single, aged forty-three, had noticed as long ago as eight or nine years an enlargement in the lower part of the abdomen and on the left side, and this had gradually increased, and latterly had become so painful as to render life almost unbearable. When seen in December, 1884, a rounded smooth movable tumour was found, about the size of a uterus at the seventh month of pregnancy. Operation was performed on February 19th, 1885, and removal of the tumour was effected by taking up the uterus at the junction of the body with the cervix in segments, and tying each with strong catgut ligatures and cutting through about half an inch above. The edges of the stump were drawn together and dropped into the pelvis. The operation was performed without the spray. The after-progress was detailed. The chief difficulty experienced was the severe gastric disturbance, the patient being unable to take any food by stomach without pain. There was a history of dyspepsia of several years' standing. On March 18th she had an attack of hæmatemesis, vomiting a large quantity of blood, and died the next day. At the post-mortem the

external wound was found perfectly healed, and the surface of the stump (cervix uteri) was cicatrised over. The stomach was filled with blood, and a large perforating ulcer was found in the posterior wall adherent to the pancreas, which had evidently prevented extravasation into the abdominal cavity. The specimens were exhibited.

Dr. BANHAM introduced a boy, aged thirteen, suffering from Pseudo-hypertrophic Paralysis, in whom there was marked hypertrophy of the muscles of the calf and buttock, and equally striking atrophy of the muscles of the chest and shoulder, especially the pectoralis major. The weakness of the legs, which was first noticed when he was six years old, had been progressive since that time. The arms had been similarly invaded, and now there was as complete a paralytic condition as is usually met with in the most advanced stages of the disease. No passive exercise having been had recourse to, and the legs remaining constantly in a flexed position, contracture had taken place in the hamstring muscles, and the knee-joints also were considered to have undergone some change. These conditions, whilst they added greatly to his helplessness, had also doubtless favoured degenerative changes. The patellar-tendon reflex was absent, and powerful faradaic currents elicited no response on the part of the calf muscles. There was, however, a feeble contraction of the gastrocnemius on the making of kathodal and anodal currents of ten milliampères. Microscopical examination of a small piece of muscle that had been harpooned from the gastrocnemius revealed the usual excess of interstitial connective tissue.

Dr. DYSON showed the Spleen and Heart from the case of Leucocythæmia which he had exhibited at the Society on March 12th. The patient died on April 17th, after diarrhœa, general anasarca, and great asthenia had supervened; coma suddenly came on half an hour before death. At the post-mortem the abdomen was found to contain a large quantity of greenish-turbid fluid. The spleen weighed 2¼ lb.; the capsule was thickened, and on the surface were three white not raised patches, and on section these were found to be white in colour and triangular in shape, the apex being inwards; they were probably old hæmorrhagic infarcts; the rest of the splenic tissue had the usual features of hypertrophy. The liver weighed 3¾ lb.; a small, whitish leukæmic patch was seen in the left lobe. Lungs healthy. Kidneys large and pale on section, calyx diminished, and capsule adherent; there was a small cyst in the right kidney. The muscular tissue of the heart was pale and thin; the sulci (auriculo-ventricular and interventricular) were occupied by a somewhat firm gelatinous tissue, composed chiefly of lymphoid tissue. The lymphatic glands were healthy, except the post-bronchial, which were pigmented and many calcareous.

# Reviews and Notices of Books.

*Nouveau Dictionnaire de Médecine et de Chirurgie Pratiques.* Directeur de Rédaction Dr. JACCOUD. Tome XXXVI., 1884 (TR—TYPHO), and Tome XXXVII., 1885. Libraire J. B. Baillière, Rue Hautefeuille, Paris.

THE thirty-sixth volume of this fine dictionary contains the following chief articles:—Trachea and Tracheotomy, by L. Dubar; Transfusion, by Oré; Tremblement, by Picot; Trepan, by Poulet; Trophoneurosis, by Leloir; Tubercle and Tuberculosis, by Hanot; Tumour, by Heurlaux; Tympanites and Typhlitis, by Lutoy; Typhoid Fever, by Homolle and Dreyfous. The thirty-seventh volume contains Typhus (Typhus, Exanthemtic, Recurrent Fever), and Cerebro-spinal Meningitis, by E. Richard; Uræmia, by Labadie Lagrange; Urethra, by Bouilly, Guiard, and Janin; Urinary Passages, by Bouilly: Urine, by Danlos, Charpentier, and Schwartz.

We naturally turned with interest in the first instance to Dr. Leloir's essay on Trophoneurosis, one of the most recent chapters added to pathology. Dr. Leloir coincides with Charcot that nothing is better established in pathology than the existence of trophic troubles consecutive upon lesions of the nerve centres or of the nerves. The tissues and organs in which these effects have been most distinctly shown are the skin, the muscles, the bones, and the joints; but M. Leloir limits his observations in this article to the trophic lesions of the skin. He commences by pointing out the intimate relation that exists between the nervous system and the skin in regard to their origin, both being developed from the epiderm, and then takes up in succession chronic erythema and superficial dermatitis; vesicular affections, such as certain forms of eczema and herpes; bullæ, including certain localised bullous eruptions and certain forms of pemphigus; pustular affections, including certain ecthymas; ulcerations, including the perforating disease and some little slender forms of trophic ulceration; gangrene; scleroderma; morphœa; facial trophoneurosis; lepra; certain forms of ichthyosis; disturbance of the pigmentary cells of the skin in the direction of excess or diminution, and vitiligo; and finally, lesions of the cutaneous appendages, as the nails, hairs, and sudoriparous and sebaceous glands—a large list, considering that it is but a few years ago since the first cases in which the connexion between the nerves and the skin were adduced by Paget, Weir Mitchell, Brown-Séquard, Charcot, and Bärensprung. The article on Tumours, though of considerable length, is materially reduced from the circumstance that many of the forms are described under their proper names in other volumes. Nearly half of this volume is occupied with the subject of Typhoid Fever, the article upon which has been written by M. Homolle, and gives a thoroughly reliable account of this disease. M. Homolle dwells strongly on the means of disinfection that should be adopted in hospitals, giving his adhesion to the methods recommended by MM. Besnier, Lucas-Championnière, and Baudrimont. Good sections are devoted to antipyretic and antithermic treatment.

The thirty-seventh volume is chiefly occupied with the consideration of five subjects—Typhus, Uræmia, Urethra, Urine, and Uterus. The article on Urine is by M. Danlos, and is a treatise in itself, occupying, with the remarkably complete bibliography of recent works with which it closes, no less than 250 pages. Commencing with Hippocrates, some of whose aphorisms are still pertinent, the author gives a succinct historical review, from the date of that physician downwards, of the advances of our knowledge. The changes which the urine undergoes even in health, and more especially in disease, have always rendered it a favourite study, and, according to Leube, from the time of Magnus of Alexandria to the close of the last century no less than 200 treatises were written upon it; whilst in M. Danlos' bibliography, which includes only the treatises and papers published from the year 1850, upwards of 600 are mentioned. The plan pursued by M. Danlos is that a short account of the physical and chemical properties of urine as a whole is first given, the several constituents are then described separately, and the changes in their quantity or nature effected by disease fully discussed. Throughout the practical side of the subject is considered, the very proper view being taken that the article is written for a Dictionary of Medicine and not for a treatise on physiology. As an example of the mode in which M. Danlos treats contested points, we venture to abstract a part of the section which deals with the changes taken place in the urea after urine has been passed. The formation of ammonium carbonate from urea by the action of acids and alkalies is of course well known, and is due to the urea taking up two equivalents of water.

"The hydration of urea may proceed in a very different manner, which, however, is full of interest to the physician. Dumas in 1830 gave the chemical equation representing the process. In 1843 Jaquemart, one of his pupils, observed that the deposit which occurs in ammoniacal urine is a very active agent in decomposing healthy urine. This was confirmed by Müller in 1860. Pasteur was the first to recognise, in his celebrated memoir on Spontaneous Generation, the presence of a low organism which he suspected to be the agent of ammoniacal fermentation—a theory the truth of which was demonstrated

by Van Tieghem. The parasite is a torula, named by Koch the micrococcus ureæ. In urine undergoing free fermentation it forms elongated chaplets composed of spherical globules, with a diameter of 0·0015 mm. Light exercises a certain influence on its development, for the side of the vessel turned towards the light is always covered with a more abundant parasitic vegetation than the opposite. The parasite grows and multiplies in highly alkaline media. It develops in a culture fluid containing, in addition to urine, yeast or phosphates, as freely as in urine. Fermentation may proceed in the fluid so long as the quantity of ammonium carbonate does not exceed 13 per cent., according to Van Tieghem. When the process is ended, the chaplets break up, and their elements fall to the bottom of the vessel in the form of exceedingly minute spherules, mixed with ammonium urate and ammoniaco-magnesian phosphate. The ferment of urea exists always and everywhere in the air, though often mixed with other organisms. The truth of this theory has been contested by Musculus, who has shown that a soluble ferment can be extracted from urine capable of converting urea into ammonium carbonate. To obtain it, it is sufficient to precipitate the putrefied urine of a patient affected with vesical catarrh with alcohol, and to collect the precipitate on a filter and dry it. On the addition of water, a substance is dissolved which rapidly destroys urea. Pasteur and Joubert have verified the truth of the statements of Musculus, and shown that the contradiction is only apparent. They have demonstrated that the torula pre-exists in all cases where the soluble ferment occurs, and that this may be regarded as the product of plant life, just as the gastric juice is the product of the cells of the gastric follicles; and it hence follows that the fermentation of the urine is a kind of diastase."

M. Danlos then briefly discusses the statements of Neubauer, Miquel, and Bouchard, and shows how the introduction of unclean instruments may induce decomposition of the urine in the bladder itself. Under the head of each constituent of the urine the quantitative and qualitative tests are given, and the characters of the urine in various diseases are recorded at length. The section on the Uterus, which runs to 340 pages, is divided into several subheadings, of which that dealing with its embryology, vices of conformation, and lesions, has been committed to the charge of M. Charpentier, the anatomy and operations to M. Schwartz, and the pathology to MM. Siredey and Danlos. The serious operation of removal of the uterus seems to have been fairly successful in France; thus Demons reports seven operations with three deaths; two cases remain well after eighteen months, and two have had relapses.

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*Clinical Lectures on Scrofulous Neck.* By T. CLIFFORD ALLBUTT, M.A., M.D., F.R.S., Consulting Physician to the Leeds General Infirmary; and *On the Surgery of Scrofulous Glands.* By T. PRIDGIN TEALE, M.A., M.B., Consulting Surgeon to the Leeds General Infirmary. London: J. and A. Churchill. 1885.

WE are very glad that these two clinical lectures, each the complement of the other, have been published. They deal with a subject which is full of distressful interest to all practitioners in this country; and no men enjoy the confidence of the profession more thoroughly and more worthily than Dr. Clifford Allbutt and Mr. Pridgin Teale. Dr. Allbutt deals with the pathological side of the question, the causes, course, and possible consequences of scrofulous glands. He lays stress upon the origin of the disease in trivial local conditions unperceived at the time, and soon forgotten, and upon the spread of the infection from gland to gland. The disastrous effects of the disease are not limited to the mere local inflammation and destruction of tissue, but include also slow chronic septic infection, and probably also tubercular infection. While clearly indicating the appropriate treatment in the earlier stages of the malady, the chief purpose of the opening lecture is to advocate thorough surgical interference in all cases of suppuration and evident caseation of the glands. Mr. Teale develops this part of the subject, and describes in full the details of the operation he has practised with striking success; and he appends short accounts of several illustrative cases. The lectures are well worthy of the attentive study of all physicians and surgeons; and we believe that the line of practice advocated in them is destined to meet with wide acceptance and be followed by great benefit to a class of sufferers to whom hitherto neither medicine nor surgery has been able to offer much aid. Part of the proof of the first lecture evidently escaped revision, for on page 4 we twice read "diathesis" for "diatheses"; and on page 7 "mucous" for "mucus," and "asceptic" for "aseptic"; on page 8, too, "prolification" must be a misprint for "proliferation."

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## OUR LIBRARY TABLE.

*Endemic Goitre or Thyreocele.* By WM. ROBINSON, M.D. and M.S. London: J. and A. Churchill. 1885.—This *brochure* contains the facts and arguments adduced by its author in his thesis for the degree of Doctor of Medicine of the University of Durham, together with subsequently added footnotes, and an appendix giving an account of three cases of cretinism. The thesis was awarded the gold medal of the year 1884. The small work is chiefly a well-arranged and practically exhaustive collection of the facts connected with goitre. One of the most interesting portions of the work is that which treats of the etiology of goitre. St. Lager's observations are quoted, showing that where the sulphide of iron exists in a form readily convertible into sulphate of iron there the endemicity of goitre is most marked. On this point our readers may refer to Dr. Thursfield's paper published in another column. Dr. Robinson gives reasons for believing that there is no diminution of goitre in Stanhope, which lies on the north bank of the river Wear. He states that there is certainly no excess of lime in the drinking water of Stanhope, for he obtained no reaction on the addition of oxalate of ammonium.

*On some Common Injuries to Limbs: their Treatment and After-treatment, including Bone-setting (so-called).* By EDWARD COTTERELL, M.R.C.S., L.R.C.P., late House-Surgeon, University College Hospital, &c. London: H. K. Lewis. 1885.—This is a readable and useful little book. Mr. Cotterell writes sensibly upon "bone-setting," stating plainly its value and its dangers. Practical hints in the treatment of common injuries of the limbs are given, and special stress is laid upon the importance of the surgeon himself ascertaining that the function of injured limbs is completely restored. Too often splints are removed, and no pains taken to restore perfect mobility of stiffened joints; this is wrong. Mr. Cotterell says so plainly, and gives good rules of treatment for such stiffness. The book will repay perusal, although not actually novel in its teaching.

*The Quarterly Journal of Microscopical Science.* No. XCVIII. April, 1885. Edited by Professors RAY LANKESTER, THISELTON DYER, E. KLEIN, MOSELEY, and SEDGWICK. London: J. and A. Churchill.—This number contains the following articles:—1. The Urinary Organs of the Amphipoda, by W. Baldwin Spencer; with one plate. 2. The Skin and Nervous System of Priapulus and Halicryptus, by Robert Scharff; with one plate. 3. The Eye and Optic Tract of Insects, by Sidney J. Hickson; with three plates. 4. A Peculiar Sense Organ in Scutigera Coleoptrata, one of the Myriapoda, by F. G. Heathcote; with one plate. 5. The Structure and Development of Loxosoma, by Sidney F. Harmer; with three plates. 6. A New Hypothesis as to the Relationship of the Lunghook of Scorpio to the Gillhook of Limulus, by E. Ray Lankester. The editors state that so many papers of value have accumulated in their hands, that they intend to issue a supplementary number in the course of the present month. It must, however, be specially ordered by subscribers. Amongst other articles they promise

one by Oudemans, on the Circulatory and Nephridial Apparatus of the Nemertea; another by W. Bateson, on the Development of Balanoglossus; a third by Baldwin Spencer, on the Early Development of Rana Temporaria; and one by Herbert Carpenter, on the Vascular System of the Urchins.

*Lehrbuch der Physiologie.* Herausgegeben von Dr. A. GRUENHAGEN. Siebente Auflage, 5te Lieferung. Leipzig: Leopold Voss. 1885.—The present part of this work, which is a new and revised edition of Funke's well-known treatise, completes the first volume and commences the second. It is chiefly occupied with the subjects of the excitability of the nerves, the capacity of the nerves to transmit impressions in opposite directions, the rapidity of nervous conduction, and the nature of nervous stimulation. The work is remarkable for a clear and continuous exposition of the science of physiology, and for the excellent bibliography which is appended to each section.

*Dwelling-houses: their Sanitary Construction and Arrangements.* By W. H. CORFIELD. Second Edition, with Illustrations, pp. 117. London: Lewis. 1885.—This is one of the best handbooks we have met with on the subject of house sanitation. It states clearly and intelligibly the requisite conditions of a healthy home, indicates the most usual defects, and points out the most appropriate remedies. It is a work deserving the study of all householders who care for their own health and for that of their families.

*Shepherd's First Aid to the Injured.* Revised and rearranged by R. BRUCE. Pp. 78. London: St. John Ambulance Association. 1885.—This work, by Surgeon-Major Shepherd, who was killed in the unfortunate massacre at Isandhlwana, was one of the first handbooks brought out for the use of the ambulance classes. It still remains, in our opinion, the best manual for the use of non-professional persons to enable them to render aid in cases of accident or sudden illness until professional assistance can be obtained.

*Help at Hand; or, What shall we do in Accidents or Illness?* By COUNTESS COWPER. Pp. 38. London: Wells, Gardner, Darton, and Co. 1885.—The object of this work is to furnish a cheap guide to "first aid," for the use of Lady Cowper's "own parish." It is to a great extent compiled from Surgeon-Major Shepherd's manual; but the chapter on Anatomy and Physiology has been omitted, probably as being unsuited to the class for whom the book is intended, and one has been added on the treatment of some of the more generally prevalent diseases. We cannot say that we approve of the addition, as we fear it will often have the effect of delaying application for professional advice in cases of serious disease.

*Illustrations of Clinical Surgery.* By JONATHAN HUTCHINSON, F.R.S. Fasciculus XVII. London: J. and A. Churchill.—The four plates in this fasciculus illustrate Extra-capsular Fractures of the Neck of the Femur, Lupus of Mucous Membranes, Superficial Forms of Rodent Cancer, and Chancres in Unusual Positions. Both the plates and the descriptive letterpress maintain a high order of merit; and those who take in this serial work possess a very valuable book on clinical surgery.

*The Tricycle in relation to Health and Recreation.* By B. W. RICHARDSON, M.D. London: W. Isbister. 1885.—The papers collected in this volume, except a few additional notes, were published in *Good Words* a year or two ago. The main questions which the author endeavours to solve are: (1) whether the tricycle can be safely used by all classes of the community, or whether it is only fitted for a select few; (2) whether the working of the tricycle is healthful as an exercise; (3) whether there are any special dangers from its employment which, apart from mere accidents from falls and collisions, militate against its general use; and (4) whether there are any practical rules which can be offered for the guidance of those of different sex and different age who are anxious to become riders. These points are all fully discussed by Dr. Richardson, and to all intending to commence the use of the tricycle we can recommend a perusal of this little book.

# New Inventions.

## NEW MICROSCOPES.

M. THEILER & SONS, of 86, Canonbury-road, London, N., have brought under our notice specimens of their "Demonstration Microscope" and the "Universal (Achromatic) Pocket Microscope." Both are of novel design, and remarkable for the simplicity of their construction, the excellence of their manufacture, and the facility with which they may be manipulated. Intended for the observation of translucent or semi-transparent objects only, mirrors and condensers are in the use of these instruments dispensed with. The method of adjusting and fixing the focus is simple and ingenious. We anticipate that a wider knowledge of the convenient arrangement and the low price of these microscopes is all that is necessary to create for them a large demand.

## SANITARY SEAMLESS STEEL SAUCEPANS.

THE increasing interest taken in the art of cookery, and the wider recognition of its importance from a public health point of view, have naturally stimulated invention in the direction of devising utensils more in harmony with the advancing intelligence in respect of the elements included in the question of the proper preparation of food. Messrs. Perkins and Son, of Bermondsey-street, have contributed to the perfecting of the process by introducing seamless steel saucepans and stewpans, for which they were awarded a silver medal at the recent Health Exhibition, and which were used at the School of Cookery in connexion therewith. These accessories to the *cuisine* are certainly quite worthy of the approval bestowed on them, and are a great improvement upon the cast-iron and copper culinary vessels hitherto employed. The ease with which cleanliness may be ensured in their use, to say nothing of their superior durability and sightliness as compared with the ordinary ware, ought to secure for these utensils extensive patronage.

## THE PARLIAMENTARY REPRESENTATION OF THE UNIVERSITIES OF EDINBURGH AND ST. ANDREWS.

*To the Editor of* THE LANCET.

SIR,—The Conservative Committee have, with the haste characteristic of sharp electioneering tactics, sent round a circular in which, putting forward as a plea the abrupt retirement of Sir Lyon Playfair, they quietly assume that Mr. Macdonald is to be allowed without opposition to take his seat as representing these universities. With a constituency consisting of so large a predominance of scientific men, it is to be hoped that some man of scientific eminence may be found to contest the election with the legal profession. I trust that my fellow-graduates will not hastily be induced to throw up their interest in Liberal politics, led astray by the plausible statements of the Conservative Committee, who would fain persuade us that no alternative can be found to the return of Mr. Macdonald.

I am, Sir, yours obediently,

June 8th, 1885. M.D. ST. AND.

AT a meeting of the Metropolitan Asylums Board on the 6th inst., it was stated that the returns of small-pox for the fortnight ending the 5th inst. showed a decrease of 97 in the total number under treatment in the hospitals of the managers. The number under treatment on the 5th inst. was 1247.

# THE LANCET.

*LONDON: SATURDAY, JUNE 13, 1885.*


WE are again confronted with the great question of Hospital Sunday. The institution is no longer a local one, confined merely to Birmingham or London, but it exists in almost every town that boasts of a hospital, and promises to be as general and as successful in the United States as it is here. In every aspect of it Hospital Sunday is a thing to be encouraged and supported. The most creedless man must believe in the existence of an untold amount of physical suffering in a community like that of the metropolis, for which the pent-up homes of outcast London afford no accommodation. It is not for us to open too widely the windows of London hospitals and to expose the mass of disease with which the medical profession is contending, for the most part without fee or reward. And not the medical profession alone, but the dozen or score of gentlemen who, almost more benevolently, undertake the administration of hospitals in days when criticism is sometimes more active than charity. It has always been our regret that the ministers of religion in London do not see the hospitals on the Saturday preceding the Sunday on which they are to preach those sermons which in the last twelve years have produced the large sum of £358,256 11*s.* 1*d.* for London medical charities. There is something exceedingly eloquent in a well-ordered hospital: the sweetness of the air, the tenderness of the medical and nursing service, the adaptation of apparatus and of diet, and the obvious comfort of the majority of the cases, would supply data that should strengthen the argument of the best preacher, and perhaps double the contributions of the congregation. While the accommodation for the living and the strong in London is so unsatisfactory, it is pleasant to know that in a London hospital there is accommodation and skill for the sick which the richest might envy. The poor patient with fever, with consumption, with incipient cancer, with an imperilled eye, with an exhausting suppuration, with joint disease, or with the misery of tumour or of calculus, cannot wait. Every day makes his case worse and his prospect darker. And yet every day such cases are kept out of London hospitals from want of funds, or from want of room. In two even of the great endowed hospitals whole wards that were meant for the poor have had to be appropriated to those who can pay. We have entered our protest against such an alienation of London hospitals; but it still exists. It has a certain fascination for embarrassed treasurers, and will certainly be extended if care is not taken. The treasurers cannot reasonably be charged with the whole blame. They say that they would willingly keep the wards for the poor if the funds were forthcoming. But they are not. Rents of hospital properties have to be reduced. Subscriptions have fallen off. And to ask the treasurers to keep wards open without giving them money is like requiring the Israelites to make bricks without giving them straw. There is a certain amount of truth in these statements. What is the remedy? The remedy is in more generous subscriptions, and a larger Hospital Sunday collection. There is no other remedy. It is astonishing to notice the large number of persons who contribute nothing to charities. Mr. BURDETT has found that in a town with twenty-five charities and 350,000 inhabitants, only 6000 persons of the whole number contributed. He was very careful to count all contributions, great and small, and yet he had to conclude that only one in fifty-eight contributed to support charities; and he considers that this town represents most other communities. The Hospital Sunday Fund has put it within the easy power of all to make their contribution to this cause. It is not meant to supersede personal subscription and interest on the part of the wealthier classes. But it is meant to appeal to all to help to make a comfortable bed for the sick, the wounded, the maimed, and the blind, that they may be healed; or if this may not be, that their misery may be abated. The average annual amount of the metropolitan collection for the last twelve years has been £29,854. This is a great sum in itself; but when considered in connexion with the suffering which it is meant to meet, or with the means of those to whom appeal is to be made on Sunday next, it must be pronounced to be inadequate. No excuse will avail for this supreme neglect. "I was sick, and ye did not minister to me." It is of no avail to say that treasurers sometimes do not spend the money wisely, or that now and again a person who can pay occupies the bed that misery should claim for its own. This is only to say that the administration of hospitals is in human hands. Let all abuse be weeded out. The Council of the Hospital Sunday Fund has done great good in this direction, and has on this ground a strong claim to the confidence of those who wish wisely to help medical charities, whether in the way of a contribution on Hospital Sunday, or of a legacy that will permanently help the sick poor of this huge and complex community. We give in another column a list of hospitals which are at the present time suffering from the crippling effects of lack of funds.

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How are the prospects of medical legislation likely to be affected by the political crisis which has occurred? At the moment of going to press we do not certainly know whether there will be an immediate transfer of authority to the opposite party, or if the still existing Government will retain office until the natural expiration of a moribund Parliament. Whatever the eventuality, it seems only too certain that the prospects of legislation for the reorganisation of the profession and the advantage of the community in matters medical must be irretrievably damaged so far as the present session is concerned. Looking back on the last five years, it is only an act of justice to record the fact that seldom, if ever, within an equal period has the medical profession received so many honours from the hands of a Prime Minister as Mr. GLADSTONE has distributed, and we are glad to acknowledge that for this measure of favour we are directly indebted to the enlightened and generous appreciation of services and usefulness shown by the gifted statesman who is now, it is to be feared, finally resigning the control of public affairs. It is not for us to speak of general politics. Science has no knowledge of party, and can only concern itself with the public good; but it will

not be thought out of place by any of our readers that we should express the strong persuasion that the respect, and if we may say so, the esteem of the medical profession will follow MR. GLADSTONE into the retirement he seeks. If some of the subordinate members of his adminstration have been less appreciative, and shown less wisdom, that is a disappointment which, however keenly felt, cannot detract from the estimation in which the medical men of of this country—as a profession—must needs hold the outgoing political chief.

There are some commotions out of which good may come to all who are affected. This cannot be our case as medical reformers. For the present certainly, and the near future we fear, medical reform will have to wait. There is no reasonable prospect that the measures which it was hoped the session might see matured will find a place in the programme of a reconstructed Cabinet or of the incoming Government. We wish we could feel hopeful as to the chance of medical reform engaging the attention of the new Parliament. There is only too much reason to anticipate that, however advantageous the extension of the franchise and the consequent reconstruction of the Lower House may prove, for some at least, the spirit of vestryism will dominate the counsels of the nation, and domestic legislation will take the form of *political* sweeping and garnishing, rather than of a broad and intelligent ministering of justice to the great public needs.

If the Conservatives should hold office, we are bound to confess that—all party views and sympathies apart—it would be absurd to expect that medical men and their opinions will count for much. The healing art has little interest for the *aristocratic* party in politics. To be a "doctor" is to be beneath regard, unworthy of honour; and to speak of the interests of health, except in a meaningless phrase, is to introduce a topic too vulgar for delicate ears. Medicine, whether as a science or as a profession, has little to hope from the party which never once in six years conferred an honour on any member of the medical body; and, though it talked much, did nothing—or, if possible, less than nothing—for the advancement of science and the encouragement of those whose lives are spent in a ceaseless struggle to reduce to practice the fruitless aphorism, *Sanitas sanitatum, omnia sanitas.*

THE extension of the franchise in its political bearings is a subject beyond our care. Both parties in the State have sanctioned it and actually co-operated in arranging it, so we may presume there is some deep justice, some deep necessity in the measure. Our concern is with the moral and social consequences of it. Millions of our humble fellow countrymen are to be endowed with grave political functions. It is not denied that many of these millions are ignorant and unintelligent, but it is supposed that by some divine instinct in the people they will be led to great and true conclusions. We hope it may be so. We are not disposed to think quite so meanly of the people as even MILTON did.

> "And what the people but a herd confused,
> A miscellaneous rabble, who extol
> Things vulgar, and, well weigh'd, scarce worth the praise?
> They praise and they admire they know not what
> And know not whom, but as one leads the other."

What we may fairly ask for in the new voters is an increase in the sense of independence, of that creditable pride which makes men almost starve rather than ask alms or parish relief. The question of disfranchisement for medical relief, which, like so many other questions, serves for Parliamentary strife and debate, should settle itself in the conscience of honest men, who should disdain to ask a voice in the settlement of national affairs till they have shown themselves capable of managing their own. How can a man receiving parish relief have either the conscience or the intelligence to vote? We demur to the doctrine that to be on the parish for medicine is different from being on the parish for a loaf of bread. We can recognise no such distinction, and we think it high time that it was exploded. Medicine is a rarer and a lesser want than food, and there is by so much the more discredit in an improvidence which does not recognise its humble claims. Medical men have been too long the scapegoats of the improvidence of the poor on the one hand, and of the scanty charity of the rich on the other. And the Franchise Bill will have a much-needed vindication if it intensifies the sense of personal responsibility in the humblest man, and makes him feel it a mean thing to go on the parish for a bottle of medicine or even for a serious illness. The humanity of the medical profession needs no vindication. It has had ample recognition from all judges and all classes. It makes the most generous provision for the poorest, and it is now for the poorest to break with all pauperising associations and to maintain their own independence and political power by entering provident clubs, in which a medical officer is fairly well paid, and in which the patient, when sick, can find not only an efficient medical man, but temporary allowances of money. No greater mistake could be made than to introduce the Irish dispensary system into England, it being greatly abused even in Ireland; and there is a great risk of doing this if we make fine distinctions between medical and other forms of relief. If the working classes are to derive benefit from the franchise, it will be by raising in them the sense of their importance and of the meanness of dependence on rates, either for medicine or anything else. Very little self-sacrifice will suffice to prevent the disfranchisement of voters on the score of medical relief, and the man who will not make it is presumably—there will no doubt be honourable exceptions—unworthy of the franchise.

HEADACHE, although so common an affection, possesses a peculiar interest on account of the tantalising obscurity in which its cause is often shadowed. Depending upon one or two main physiological principles connected with the passage of nervous impulses and the calibre of cerebral bloodvessels, it yet arises in response to so many different stimuli, that, practically, the branches of its original stem of structure, its distributive variations, are perplexingly numerous. Among the forms but recently described and named, though probably as old as Art, is the "academy headache." Critics and doctors have vied with one another in trying to translate this term according to the rules of medical logic, but have not, so far, been able to agree as to its meaning. In venturing to put forward our own opinion on the subject, we think it best to notice the different circumstances which tend to produce in the frequenter of

galleries that general sense of fatigue which is often the precursor of pain, and then to note the special stimulus which brings out of this chaos the formed and local ache. It should be noted that all do not suffer from this form of headache; while of those who do, some are less and some more affected. Fatigue may be the limit of annoyance with a certain class. They are heavy-limbed and heavy-headed, languid, but no more. The forces at work upon them are the warmth of the crowded room, the summer sunshine pouring through the skylights, the listless rotation or circulation, rather than walking, through the rooms, and the weariness of much-divided attention. Being robust and used to go about upon their feet, they soon lose the feeling of languor after its causes cease to act; and if their eyesight be equally healthy, they suffer no strain in these organs. There are other persons, of weaker organisation or more sedentary habits, in whom pain quickly follows fatigue, and it is felt, for certain reasons, chiefly in the head. Among these reasons we must note the fact that in the standing position the blood, driven by a languid heart, reaches the head with greater difficulty than when recumbent. Anæmia is one cause of headache. Anæmia, too, is associated with changes of arterial calibre which constitute the usual cause of megrim. Under these conditions, also, the giddy malaise of a loitering gait is painfully perceptible. Concentrated attention increases the uneasy sensation. The frequently constrained position of the head has its influence. It would be strange, moreover, if ocular movements had no share in the production of this complex indisposition. Let anyone converge his eyeballs to an acute angle, as in squinting, or let him direct a side-long glance of extreme obliquity, and a single effort will convince him of the pain of such muscular effort. No doubt this is the pain of muscular tension, acute and so far abnormal; but it is also possible to induce a similar pain from the strain of too frequent muscular action within the normal limits of accommodation to distance or other movements of the eye. Ocular pains of this kind are felt as an aching about the middle and back of the head. The scrutiny of paintings or engravings, from the many points of interest which have to be noted, requires a considerably greater exercise of the muscles of the eyeball than is called for in ordinary life. In this fact, established, as we have already stated, on a basis of fatigue and general muscular and nervous strain, we have probably the usual exciting cause of the form of headache we have been discussing.

# Annotations.

"Ne quid nimis."

## THE COLLEGE ELECTION.

FOR the three vacancies in the Council of the Royal College of Surgeons of England there will be seven candidates—namely, Mr. Savory, who seeks re-election, and, in their order as Fellows, Messrs. Gant, F. Mason, Rouse, Cowell, Macnamara, and O. Pemberton. It will be remembered that the other retiring members, Messrs. Erichsen and Holmes, do not desire re-election. This is a regrettable circumstance, as both these gentlemen are avowed supporters of a policy of reform. Their withdrawal from the Council at this time may therefore seriously cripple the action of the party favourable to progress. At all events, it suggests a more careful selection of candidates and a closer scrutiny of their views. It would save some misunderstanding and possible recrimination if all candidates were to set forth briefly and succinctly their political doctrines. For the last two or three years several candidates have owed their election to a general belief that they would support certain projected attempts to place the Council *en rapport* with the Fellows and Members. No sooner were they elected than they gave their votes in favour of maintaining the *status quo ante*. While it would be unjust to impugn the probity of these members of the Council, it is impossible to acquit them of culpable political incapacity, indifference, or ignorance. Such a contingency should not be possible. If a candidate is not prepared to make a declaration of his political faith and belief, he ought at least to have the courage not tacitly to accept imputations which, though favourable to his election, are contrary to his convictions.

## MEDICAL DEGREES AT OXFORD.

ON Tuesday last, the 9th inst., the preambles of two statutes of great importance to candidates for the medical degrees of this University were approved. By the first, a Faculty of Medicine distinct from that of natural science was constituted, and the professors of anatomy, botany, chemistry, experimental philosophy, medicine, natural philosophy, and physiology were assigned *ex officio* to the Board of the Faculty. By the second, the examinations for the degrees will be materially changed, and the alterations are very freely criticised. Exception is especially taken to the proposition that any candidate may be exempted from the whole or any part of the examinations in medicine, surgery, or midwifery, if he has passed a qualifying examination in these subjects approved by the Board. It is evidently intended by this clause that candidates for the final M.B. examination should have previously passed the Conjoint Board of the Colleges of Physicians and Surgeons, and to this the Oxford medical graduates are unanimously opposed. They urge very forcibly that Oxford has nothing to do with the corporate examinations, which are only put forward as a necessary minimum of medical knowledge, and that it will make a false step if it allows the principle that the University can accept an examination carried on independently of itself as the equivalent of its own. The subjects proposed for the three examinations for the M.B. degree are—for the first, elementary anatomy and physiology, organic chemistry, materia medica and pharmacy; for the second, human anatomy and physiology; for the third, medicine, surgery, midwifery, pathology, pharmacology, and climatology.

## THE ETIOLOGY OF ERYSIPELAS.

THE now fairly well determined fact that erysipelas is a disease due to the invasion of micrococci has not hitherto led to a sufficient explanation of the varieties of the disease, and particularly of the points of difference and of resemblance between traumatic and idiopathic (so-called) erysipelas. In an interesting study of the subject in Virchow's *Archiv* (Bd. 100, Hft. 2), Dr. Rheimer, pathological assistant at Zurich, after reviewing the evidence as yet adduced concerning the nature of erysipelas, details the results of his examination of two cases of typhoid fever in which this complication occurred. The cases arose in a very severe epidemic which took place in Zurich in the spring of 1884, and he contrasts the microscopical characters of the affected skin, and other tissues obtained from them, with those observed in traumatic erysipelas. In the latter he describes not only masses of minute cocci in the lymphatic spaces and vessels, but also very definite chains of larger cocci and diplococci, apparently the same as those originally described by Recklinghausen,

and since by Lukomsky, Koch, Ziegler, and many others. In the typhoid erysipelas these last-named micro-organisms were conspicuous by their absence; for although the minuter forms were present in much the same situations and character as in traumatic cases, there were, instead of large micrococci, a number of mostly straight rod-shaped organisms scattered throughout the tissue. These organisms stained badly with reagents, and were apparently identical with the bacilli which Klebs, Eberth, and Gaffky have found more or less constantly in typhoid fever. Although the fact of the existence of a "bacillus typhosus" is still *sub judice*, and has indeed been contested by many, it receives a certain amount of confirmation from this discovery. The latter has, however, a bearing upon the etiology of erysipelas, as indicating that the cutaneous lesion—i.e., the dermatitis—may indeed be excited by more than one kind of poison, or, perhaps, to speak more correctly, by more than one kind of micro-parasite. It may be that there is a specific erysipelas organism for the traumatic affection; but it is possible that the spontaneous cases, and especially those which arise as complications of other infective diseases, own a different etiology. The question is a suggestive one, and offers a fertile field for further research.

## FAITH-HEALING A FACT.

THERE can be no question that faith-healing is a fact The brain is not simply the organ of the mind, it is also the chief centre, or series of centres, of the nervous system by which the whole body is energised, and its component parts with their several functions are governed and regulated. There is no miracle in healing by faith; whereas it would be a miracle if the organism, being constituted as it is, and the laws of life such as they are, faith-healing did not under favourable conditions occur. The fallacy of those who proclaim faith-healing as a religious function lies in the fact that they misunderstand and misinterpret their own formula. It is the *faith* that heals, not the hypothecated source, or object, of faith outside the subject of faith. The whole process is self-contained. Nothing is done for the believer; his act of believing is the motor force of his cure. We all remember the old trick of making a man ill by persistently telling him he is ill until he believes it. The contrary of this is making a man well by inducing him to believe himself to be so. The number of the "miracles" performed will be the precise number of the persons who are capable of being thrown into a state of mind and body in which "faith" dominates the organic state. Pathologists will limit the area of this process to the province of functional disease; but we are not sure that they are justified by scientific facts in making this limitation. It must not be forgotten that function goes before organism in development, and that there are large classes of cases in which the disabilities of a diseased organ for a fair performance of its functions are mainly due to want of power or irregularity in action. And it is a fact in pathology, that if the function of an organ be maintained or restored much of the destructive metamorphosis due to proliferation of connective tissue, fatty deposit, or even certain forms of atrophic change in which the nuclei of cell-life are rather denuded than destroyed, may be arrested and to some extent repaired. The *vis medicatrix naturæ* is a very potent factor in the amelioration of disease, if only it be allowed fair play. An exercise of "faith" as a rule suspends the operation of adverse influences, and appeals strongly through the consciousness to the inner and underlying faculty of vital force. There are many intractable cases in every practice which might be "cured by faith." It is well that these poor persons should be benefited by some means, it matters little what; and if they can be "healed by faith" we ought to be very glad, and thankful too, for the mistaken zeal of those who, being weak-minded themselves, make dupes of other weak-minded folk to their advantage. This is a blind leading of the blind in which they do not fall into the ditch, but, by a happy combination of circumstances, actually escape danger and gain something to boot.

## INCONCLUSIVE EVIDENCE OF THE CAUSE OF DEATH.

AN inquest was held at Horninglow, on June the 3rd, before Mr. A. Flint, coroner for the district, touching the death of Mrs. Millar, aged twenty-seven, wife of the vicar of the parish. It appears that the deceased, who was in her usual health on Sunday evening, May 31st, retired to her bedroom at half past ten o'clock, seeming then a little unwell, and at eleven—half an hour afterwards—she was discovered dead on her bed. There was nothing in the surrounding circumstances to explain or suggest the cause of death beyond lividity of the face and blueness of the lips noticed by the husband of the deceased. Dr. W. G. Lowe, who saw the body some two hours later, deposed that there was "a little livid discolouration of the nose, and her lips looked a little blue, but not markedly so; the rest of the face was pale." At the autopsy no organic disease was discovered. A small piece of orange pulp was found in the mouth, but it had clearly not caused death by impaction in the glottis. We cannot agree with Dr. Lowe when he says: "There would have been more indications" if poison had been taken, for it is well known that certain narcotics and convulsants leave no characteristic sign of their action. We have no reason to believe that death arose from other than natural causes, as found by the jury; at the same time we hold that the evidence was sufficiently equivocal to warrant further inquiry. No mention is made in the report of the inquest whether the urine was examined or not. Was there albuminuric eclampsia? Was there diabetic coma? Was the deceased subject to epilepsy in its minor manifestations? Was there a neurotic family history? These are questions that suggest themselves for investigation. Diabetic coma rarely ends so quickly as to be a probable explanation of this case, but we want further experience of the variations to which this peculiar and interesting state is liable. Mrs. Millar may have died from natural causes—apparently she did; but notwithstanding, it is matter of regret that the proximate cause of death was not brought within narrower limits.

## A POISONOUS CARPET.

ANOTHER and aggravated example of poisoning, apparently by arsenic, is said to have occurred in New York. A green carpet, which was cut and sewn by the lady who purchased it, acted in this case as the medium of conveyance. The symptoms present are not detailed. They were, however, severe, and unexplained by any circumstance until traced to the carpet referred to, and this article was found on analysis to be loaded with pigment of the most dangerous kind. Such cases are, unfortunately, too old in memory, and too unmistakable, to afford in themselves much material for comment. One important fact is recorded in the instance before us, and is well worthy of general imitation. The local sanitary authorities have taken the matter in hand, with the intention of prosecuting the manufacturer of the carpet, and will thus do what they can to prevent the occurrence of such culpable mishaps in future. This is the most effective method of dealing with such cases of domestic poisoning. Unless the source of the evil is stopped, there is obviously little hope of a permanent cure. The mere treatment of its effects will not suffice. The purchaser of dyed material on his part cannot be expected

to distinguish at sight a noxious arsenical or other dye from a harmless one of exactly similar hue. He usually and almost inevitably derives his proof of quality from painful experience. The subject therefore is clearly one which calls for penal regulation at an earlier stage, and the example set by the Sanitary Board of New York will not, we hope, be lost upon our own Legislature and Executive body.

## AN INFECTIOUS DISEASE HOSPITAL FOR NOTTINGHAM.

THE Corporation of Nottingham have just decided to purchase 126 acres of land situated, not, as stated last week, on the site of the dwellings to be demolished, but outside the town and some two miles distant from the market-place, for the purpose of erecting thereon a new hospital for infectious disease. They have certainly acted wisely in the step they have taken; the situation of the existing hospital is open to much criticism, and, as we have before pointed out, has had in its immediate neighbourhood, when used for the reception of small-pox patients, a suspicious number of cases of this disease. By going to the intended site they will escape this risk, and will doubtless be able to save themselves in the future the expenses of litigation, which have made small-pox hospitals so costly to London ratepayers. But to avoid litigation is not, however, the whole object to be considered. Nottingham will judge the matter from a higher point of view than is possible for London under existing government. In Nottingham the hospital is to be used for the prevention of infectious disease; in London the primary object of similar institutions is for the treatment of persons suffering from this class of malady. The difference between the two purposes is worthy of observation.

## THE TREATMENT OF CHOLERA.

THE current number of the *Practitioner* contains the concluding paper of the interesting series that have been published in that journal by Drs. Lauder Brunton and Pye-Smith, in the course of which they have discussed the present knowledge of the pathology of cholera. Speaking of the treatment of the disease, they divide remedies into five classes: of these, three contain remedies which act on the intestine. They are—1. Those which are likely to have an antiseptic action on the intestine by destroying any organisms there present, such as carbolic acid and its allies, sulphurous acid, nitro-muriatic acid, hyposulphites, permanganates, chlorine, chloralum, turpentine, salts of copper, boracic acid, calomel, and corrosive sublimate. The cholagogue action of calomel is thought to be of service by inducing indirectly the antiseptic action of bile. 2. Those remedies which will tend to remove the cholera poison, whether it consists of living organisms or of some chemical substance, exemplified by the treatment by castor oil and other purgatives. 3. Those remedies which will counteract the effect of the poison upon the intestinal canal, as opium, morphia, ice water, belladonna, cannabis indica, chloroform, chloral, carminatives, and astringents. 4. Remedies which will tend to eliminate the poison from the system, as copious draughts of water (as diuretic) and purgatives. 5. Those remedies which will counteract the effects of the poison—viz., intravenous injection of saline fluids and other substances, and various measures to restore the circulation by acting upon the skin. In dealing with the premonitory diarrhœa, Cantani's method of injections, by means of the long intestinal tube, of laudanum and tannic acid is described. The authors consider that Ferrán's results of inoculation are more favourable than could have been expected, and point out the following as "directions in which further researches after a remedy for cholera are most likely to prove successful":—"1. The discovery of an antiseptic which will destroy pathogenic organisms in the intestine and prevent the formation of the cholera poison, while they are not themselves poisonous. Corrosive sublimate is a sufficiently powerful antiseptic, but it may itself prove poisonous to the patient as well as to the pathogenic organisms. It is possible that amongst the members of the aromatic group of bodies substance may be found having the desired properties. 2. The discovery of some substance which will antagonise the action of the cholera poison after its absorption. As a preliminary step in this direction further experiments are needed in the nature and action of alkaloidal substances obtained from cholera dejecta, as well as from artificial cultivations in various media and under various conditions, electrical and otherwise. 3. Observations on the effect of stimulation of the mesenteric plexus by currents passed through the uninjured abdomen in poisoned animals and in patients suffering from the disease."

## THE DARWIN MEMORIAL STATUE.

ON Wednesday last the Prince of Wales accepted, on behalf of the Trustees of the British Museum and for the nation, a statue of Darwin. There was a large gathering of scientific men, and the statue, which is the work of Mr. Boehm, has been placed in the Great Hall of the New Natural History Museum at South Kensington. Mr. Huxley, who was chairman of the committee and is the President of the Royal Society, made a characteristic speech, in which he pointed out that the publication of the "Origin of Species" practically effected a revolution in science, whilst its effects were even now being felt in many other departments of human knowledge. Vehemently opposed in the first instance, the foundations of that work were laid so deeply, and its conclusions were so well supported by facts, and afforded such satisfactory solutions of problems long regarded as insoluble, that, even within the author's lifetime, he had the satisfaction of feeling that his views were accepted by naturalists in every country, and the majority were engaged in applying them in their every-day work, rather than in attempting to dispute their value and accuracy. The subscriptions for the statue have been sent in from almost every civilised country, and the interesting statement was made that from Sweden alone 2296 subscriptions were received, the donors differing in station from the bishop to the seamstress, and the sums from £5 to 2*d*. The statue has been erected from a small part only of these subscriptions; the major part is to be applied to what the modest philosopher would have most desired—the promotion of biological research.

## POISONING BY PENNY ICES.

In the year 1878[1] we drew the attention of the profession to the manufacture of penny ices, showing their composition and the quality of their ingredients. In the following year, 1879,[2] a LANCET Sanitary Commission reported on the condition of the Italian quarter, and described the mode of life and surroundings of the London penny ice man when at home. We fear that as great a necessity for supervision by the local sanitary authorities exists now as when the inquiries were made, and that chemical examination of samples of the ices should be made from time to time as then recommended. During Sunday, June 7th, and Monday, June 8th, more than twenty people suffered from symptoms of irritant poisoning, which came on about two hours after partaking of penny ices bought from one of the Italian street barrows. Thirteen of these were treated by the house physician, Mr. R. M. Williams, at St. Thomas's Hospital, the symptoms being

[1] Vide THE LANCET, vol. ii., p. 264. [2] Ibid., vol. ii., p. 899.

similar, but varying in severity. The most severe case was that of a woman aged forty-two, who was admitted. She arrived about four hours after eating one of the ices, suffering from severe colicky pains, diarrhœa, some vomiting, dryness of the fauces and tongue, and collapse. An emetic was given, which produced free vomiting; later she was given some carminatives, with ammonia, and was able to return home on the following day. Some of the cases treated at their own homes were quite as severe as this. It was difficult to say what was the cause of these symptoms. The day after these people were poisoned the contents of the ice-bowl were examined, but with negative results. Examination of the vomited matter, however, has proved the presence of sufficient carbolic acid to explain the symptoms, and it is probable that this found its way into the ices from carelessness on the part of the maker; carbolic acid being used in the earlier stages of manufacture of a preservative material which is employed by the men to prevent decomposition of the ingredients used in making the various ices. Either the chemical processes had not been carried out to their full extent, and the solution used contained much free acid, or the acid itself had been employed by mistake.

## LOZANO ON THE MORTALITY OF MADRID.

DR. G. G. LOZANO endeavours, in a series of essays just reproduced in pamphlet form, to account for the high rate of mortality existing at Madrid. He complains that medical students have but little instruction given them in the diseases of children, amongst whom the mortality is especially high. In his own case he says that he had but a single lesson, from an eminent professor it is true, in the diseases of childhood, and as, when he began practice, his first patients were children, he found himself in an unpleasant situation. There is plenty of clinical material for such instruction in Madrid if it were made proper use of. He complains also of the number of *curanderos*, or quacks, and tells a story about one who "put the bone in" in a case of abscess, which could probably be matched by many an English surgeon who happens to practise in the vicinity of a bone-setter. Small-pox claims a considerable number of victims. Señor Lozano, however, does not discuss the efficiency of the arrangements for vaccination, though he enters at some length on the subject of the importance of a new hospital for contagious diseases, with especial reference to variola. He passes over in a few words the subject of general hygiene, and we look in vain for any proposal for a satisfactory system of drainage, which must be sadly needed in Madrid. A good deal is made of the want of ventilation, and of the injurious crowding in theatres and cafés, and some mention is made of the vices of the inhabitants. The writer is very dissatisfied with the death-rates as published; that of Madrid is, in his opinion, too high, and that of London too low, his respect for the figures in the "Annual Summary" of Messrs. Eyre and Spottiswoode being very small.

## EXCITABILITY OF THE CEREBRAL CORTEX.

AT recent meetings of the Académie des Sciences M. Vulpian has continued his demonstrations on some of the functions of the cerebral cortex. He points out that in the dog the effect of an equal stimulus is greater at the facial centre of the cortex than it is at the brachial or crural centres. Pflüger's theory, that a nervous impulse gathers force as it passes along a nerve (avalanche theory), is rejected. If the avalanche theory be true, then stimulation of the crural centre of the cortex ought to give rise to a more energetic contraction than stimulation of the facial centre. The opposite is notoriously the case. Vulpian believes that electrical excitations must be stronger in order to put into action the posterior limb than those used to provoke a facial movement, not because there is any real difference in the excitability of the grey matter of the two regions, but simply because of the distances which separate the centres from the muscles. In the same way, if the dog be anæsthetised by successive doses of chloral hydrate, a time arrives at which a certain stimulation of the cerebral cortex fails to excite a movement in the limbs, whilst the same stimulus may call forth a movement of the face. The reason, according to Vulpian, of this difference is simply that the impulse originated by the electric stimulation has a less distance to pass before it reaches the facial nucleus than it has to reach the nuclei governing the movements of the limbs. Vulpian argues in favour of a uniform excitability of the grey matter of the so-called motor centres.

## THE LATE PROFESSOR COHNHEIM.

THE numerous contributions to pathological science which Professor Cohnheim made during the twenty years of his active scientific career have been collected into a volume ("Gesammelte Abhandlungen von Julius Cohnheim." Berlin: A. Hirschwald), under the editorship of Dr. E. Wagner. The papers and monographs, thirty-eight in number, are mostly reprinted from Virchow's *Archiv*, to which Cohnheim was a constant contributor. They are arranged in chronological order, opening with his essay on Inflammation of Serous Membranes (1861), and closing with his Studies on Renal Circulation, made in conjunction with Dr. Charles Roy (1883). Between these two how many familiar subjects are to be found in essays that have attained a world-wide renown! Here, for example, is the famous paper on Inflammation and Suppuration (1867), and the well-nigh as celebrated Researches on the Embolic Process (1872); followed by those studies upon circulatory disorders, œdema, dropsy, &c., which seem naturally to flow from the new ideas. Here, too, is his suggestive paper on Tumour Metastasis, and his celebrated address on Tuberculosis, which may be said to have anticipated the subsequent discoveries of Koch. Besides these there are many contributions to pathological anatomy. The volume, taken together with the well-known "Vorlesungen über Allgemeine Pathologie," forms a lasting memorial of the ardent student and teacher, who, in spite of continued ill health, contrived to contribute so largely to knowledge, and to inspire so many with a like zeal for research. The value of the book is enhanced by a memoir of the author from the pen of Professor W. Kühne, who knew him well, and who testifies to the severe loss sustained by his early death. A portrait of Cohnheim is prefixed to the volume. Many who knew him only by his work will doubtless be glad to possess a volume which those who did know him personally will cherish as embodying the history of his career, for his life compels admiration not only for the genius he possessed, but for his nobility of character and the steadfastness with which he pursued his duties under obstacles that would have crushed a man of less abundant energy.

## TREATMENT OF RICKETS.

DR. SEMZCHENKO writes to a St. Petersburg journal that he was induced by the successful results obtained by Kassovitz in the treatment of rickets by phosphorus to make trial of it, notwithstanding the adverse statements of Henoch and Schwechten. He gave it to fifteen children from eleven weeks to twenty-two months old, all other medicine being intermitted during the trial of the phosphorus, which was prescribed in an emulsion with sugar and gum. It was only stopped when severe vomiting occurred. He came to the conclusion that it was an utterly useless mode of treating these cases, and reverted to his usual method of

managing rickety children, which consists of giving salt baths daily, the head being washed with warm water and the whole body with brandy-and-water. Internally tannate of quinine (one to two grains) is administered with one-eighth of a grain of extract of secale in from two to four powders daily. They are fed with bouillon, boiled milk with from one to two tablespoonfuls of lime-water and from a quarter to half a teaspoonful of cognac to the tumbler. Children at the breast are given a teaspoonful of lime-water and glycerine from two to four times a day. When they have large abdomens, enemata (one to two tumblerfuls), containing from fifteen to forty grains of salicylate of soda, from ten to thirty grains of borax, or from two to three tablespoonfuls of a 1 per cent. solution of carbolic acid, are given. In from one to two months the little patients invariably show a marked improvement under this method of treatment.

## THE LATE MEDICAL OFFICER OF HEALTH FOR LEICESTER.

WE hear with much regret that Dr. William Johnston has resigned the appointment of Medical Officer of Health to the Borough of Leicester, which he has held for seven years. Dr. Johnston's excellent work during this period, and especially his investigations into the etiology of infantile diarrhœa, are well known to the profession. It is therefore with the more surprise we learn from the *Leicester Advertiser* of May 30th that his retirement is due to the difficulties he has encountered at the hands of members of his authority, and has resulted from "the bullying and hectoring" he has been called upon to endure. The position of the medical officer of health is becoming increasingly difficult. He is expected to bring to the performance of his duties a greater technical knowledge, and is required to devote to them, for very inadequate remuneration, a considerable portion, if not the whole, of his time. He is also required by public opinion to protect the inhabitants of his district against disease, and to do so he must necessarily interfere with the vested interests of those who are but too readily allowed to assume the position of his employers. The duties of other officers of local authorities, clerks, surveyors, &c., do not cause them to excite the hostility of individuals whose interests are opposed to sanitary improvement, and their positions are therefore sufficiently secure. The medical officer of health is, however, differently circumstanced, and recent events have but too clearly shown the need for an improvement of his position. Unless the public mind is soon awakened to the importance of this matter, the public health service will deteriorate, and the public themselves suffer.

## ŒDEMA OF THE GLOTTIS IN TABES DORSALIS.

ANY phenomenon may be met with in the course of tabes dorsalis; at least, this statement would seem to be a warrantable conclusion from known facts. We must not lose sight of the circumstance that accidental phenomena also exist and may occur in tabes dorsalis, as in any other disease, without any special significance. M. Huchard read at a recent meeting of the Société Médicale des Hôpitaux (*La France Médicale*, June 2nd) a paper on a case of Œdema of the Glottis following the administration of iodide of potassium in a patient the subject of tabes dorsalis. There was no history of syphilis or alcoholism, and no evidence of Bright's disease. The man was treated on account of the locomotor ataxy with four grammes of iodide of potassium per day. The treatment had to be suspended owing to the induction of iodism. After some days the medicament was given in smaller doses. This renewed treatment was followed by grave attacks of dyspnœa, which threatened suffocation. M. Gougenheim detected œdema of the arytenoid region by laryngoscopic examination. During one of the attacks the "interne" was obliged to perform tracheotomy. The patient ultimately did well. M. Huchard thought that the grave result was largely due to the influence of the iodide of potassium, whilst admitting that a sensory disturbance in tabes dorsalis may have played a part in the occurrence of the phenomenon. Chemical examination of the iodide of potassium showed that it was impure and contained a certain amount of iodates.

## TREATMENT OF NEURALGIA BY NEUBER'S METHOD.

DR. SCHAPIRO recently read a paper, at the Medical Society of St. Petersburg, upon the results of researches on treatment of neuralgia by Neuber's method of hypodermic injections of a solution of osmic acid. His observations include eight cases of trigeminal neuralgia (three males and five females). The age of the patients varied from thirty-eight to sixty. In every case the disease was of a very severe type and of long standing. The result of the treatment was complete cure in five cases (three females and two males), great alleviation of the pain in two cases, and no success at all in one case (female). The number of injections made in each case was from one to twelve (twenty in one case), five to ten drops being injected every time. The duration of the treatment was from one to sixty days. Dr. Schapiro adopts a modification of Neuber's 1 per cent. aqueous osmic solution on account of the osmic acid soon undergoing decomposition in a watery solution. After a whole series of combinations, he concluded that an addition of glycerine to the watery solution prevents for a long time osmic acid from undergoing any change. In not one of the cases treated by him was an injection followed by any ill effect. The patients are now under the author's observation (two to six months after the commencement of the treatment).

## VIVISECTION RETURN.

THE return issued by the Home Office containing the reports of the inspectors showing the number of experiments performed on living animals during the year 1884 appears to us to be highly satisfactory. It shows that a considerable amount of judgment and caution must have been exercised in the granting of licences, and this is indicated not so much by the paucity of persons holding licences as by the nature of the experiments and the purposes for which they were undertaken. We believe the Home Office takes a good deal of trouble in endeavouring to ascertain, not only from its inspectors, but from the most eminent men in science, whether the experiments proposed to be done by the applicant for a licence are such as are likely to be attended with useful or important results. Licences have been refused or the application allowed to fall through as the outcome of this advice from men fully competent to judge. Altogether 441 experiments were performed under forty-nine licences held in England and Scotland. Of these 218 were done under the full influence of anæsthetics, and the animal not being allowed to recover consciousness no pain would be felt. Of the remaining 223, 99 experiments simply consisted in inoculation with a morbid virus, and the pain caused at the time and the suffering experienced afterwards amounted to no more than ensues on ordinary vaccination; but of the 99 only 16 are reported as suffering afterwards, for the inoculation had no morbid effect in the majority. Twenty-four experiments were performed for the purposes of medico-legal inquiries in cases of suspected poisoning, resulting in death by tetanus of three frogs and six mice, which survived, however, only a few minutes. Ten other cases were experiments on the infection of fish with a species of fungus very

destructive in certain rivers and streams; and five on the effects of immersion of fish in distilled water, which proved fatal to about thirty minnows and sticklebacks. In none of these cases could it be said that any appreciable suffering was inflicted. In seven cases in which the salts of ammonia were hypodermically injected, two are returned as having suffered pain, but of a very trifling character. Of the remaining 76 experiments, 47 required a simple operation, but this was always done under anæsthesia, and the after-effects, though in many cases resulting in partial paralysis, are reported as having been unattended with actual pain in any case. The report concludes by stating that the amount of direct or indirect actual suffering, as the result of physiological and therapeutical experiments performed in England and Scotland under the Act in the year 1884, was wholly insignificant. In Ireland the report states that only thirteen experiments were performed, and these were all of a painless character.

## MEDICAL HONOURS.

OF the honours bestowed in connexion with Her Majesty's birthday a few have fallen to the share of members of the medical profession. Dr. Peter Eade, F.R.C.P.L., lately Mayor of Norwich, has received a knighthood; Dr. J. M. Cuningham, lately Sanitary Commissioner with the Government of India, has been appointed Companion of the Order of the Star of India; and Francis Day, Esq., Deputy Surgeon-General (retired), Medical Department, Madras, Companion of the Order of the Indian Empire.

## SIR CHARLES ALEXANDER CAMERON.

THE profession as well as the public will learn with much pleasure that Dr. Cameron, the medical officer of health for Dublin, has received the honour of knighthood. It is stated that Dr. Cameron's services in the promotion of the public health have gained for him this distinction, and we warmly congratulate him upon being the first health officer who has had his services thus recognised. As a rule, honours of this character are bestowed upon medical men only for personal services to the Sovereign, the principal medical officers of the Army and Navy and very few others being exceptions. Sanitary service has, however, grown in public estimation, and we may hope to see in the future that the prevention of disease and saving of life effected through its means are thought to be not less deserving of recognition than other duties performed for the State.

## CHOLERA IN EUROPE.

THE increase of cholera in the east of Spain and the invasion of fresh towns may be regarded as an indication that the year will not pass away without a repetition of some of the calamities which marked the appearance of the disease in France and Italy last summer. As yet there is no confirmation of the report that Marseilles is again the seat of the disease; but there can be no question of its prevalence in Madrid, and as the season progresses and the warm weather of June and July has had opportunity to exert its influence, we shall doubtless hear of the extension of cholera into more northern latitudes. Whether England may come within the area of its operations during the present year it is as yet too early to predict; but the fact that the second week of June has nearly ended without any sign of cholera in the direction which it usually follows before reaching this country is no criterion that we shall escape. The inoculations of Dr. Ferrán will doubtless excite more interest on the Continent than in England; our own defences against the disease are fortunately not only of a more trustworthy, but of a more permanent, character.

## MIND AND MATTER RECONCILED.

MR. ROMANES, the Rede Lecturer at Cambridge this year, has hit upon an ingenious way of reconciling the antagonistic properties and interests of mind and matter. Finding himself in the midst of the cross fire between the spiritualists and the materialists in science, he proposes to put an end to the conflict by a synthetical process of reasoning, in which he seeks to show that the antithesis between mind and motion is phenomenal or apparent, not absolute or real. He does not think matter is the cause of mind or mind the cause of matter; in other words, motion does not always cause change or change always cause motion, but the two working side by side react and work out the chain of cause and effect together. This is a new development or application of the law of resultants, by which two forces acting in converging lines, or obliquely upon each other, give rise to a third or intermediate force, which is the result of their mutual reaction. We are therefore to believe that neither spiritualistic views of science are true nor materialistic views, but that truth is a mean of the two. We trust those who are harassed on the subject will find comfort in this new revelation of fact.

## COCAINE IN "SNUFFLES."

DR. ZEMSHCHENKO has treated seventeen infants from two weeks to eleven months old with coryza by means of cocaine dropped into the nose. Two drops of a 2 per cent. solution were thus applied from four to six times a day with remarkably good results. In only one case was any increase of secretion observed. He has also made use of a 4 per cent. solution for older children. As, however, there is some risk of the solution being swallowed and producing vomiting, he finds it best to apply the cocaine by means of an ointment. In one case of suspected "snuffles" in a child three weeks old whose mother was syphilitic, the writer painted the nares with a 2 per cent. solution with a satisfactory result.

## THE ASSOCIATION OF FELLOWS OF THE ROYAL COLLEGE OF SURGEONS.

THE Lord President of the Council has acknowledged the receipt of a letter from the Association, praying that the proposed new Charter of the College shall not be approved till the Fellows have had an opportunity of setting forth their views, which in many important respects differ from those adopted by a majority of the Council.

## THE FRIENDLY SOCIETIES AND THE HOSPITALS.

THE Friendly Societies have recently made several demonstrations in support of the hospitals of London. Sometimes these take place on a Sunday, doubtless on the principle "the better day the better deed," and we fully recognise the goodness of the motive and of the service. But we are disposed to think that the bands would discourse their music more effectually for the purpose on some other day of the week—say on a summer Saturday afternoon.

## DETECTION OF COPPER AND LEAD IN WINE.

A NEW method for testing the freedom of wines from cupric and plumbic salts has been put forward by H. Hager in the *Analyst*. The wine is mixed with half its volume of a clear solution of caustic soda which may contain carbonate. If the liquid remain clear after boiling, neither copper nor lead is present. A turbidity with colouration points to the presence of copper. About six cub. cent. of this solution are poured into a test tube, a piece of tin-foil introduced, and the whole heated for half an hour on the water bath. If lead and copper be absent, the foil remains perfectly bright; whereas if in the presence of a

trace of one of these metals it becomes dull and grey for lead, and brown or brown-black for copper. This reaction may be applied to all cases when other metals are not present, and the solution remains clear after the addition of alkali.

## SIR ANDREW CLARK.

THE profession will learn with regret that Sir Andrew Clark has been confined to bed for the past few days. But we are glad to be able to announce that, under the care of Dr. George Johnson, he is so far improved in health that he intends resuming his professional work on Monday. Sir Andrew will not take it ill from us if we venture to express the hope that he will use his indisposition as a sound excuse for refraining from working so hard.

## DISARTICULATION OF THE HIP WITHOUT ANÆSTHESIA.

PROFESSOR GRUBE has recorded in the *Russkaya Meditsina* a case of disarticulation at the hip-joint for a large sarcomatous growth of the femur which weighed about sixty pounds, or nearly a third of the total weight of the patient. Distinct cardiac mischief being present, it was deemed necessary to avoid the use of an anæsthetic, also that of Esmarch's bandage. The patient was convalescent in seven weeks.

## FATAL CASE OF PORRO'S OPERATION.

*Il Morgagni* of the 30th ult. relates the case of a primipara aged thirty-two, on whom Dr. Antonio Fibbi of Fabriano performed Porro's operation on April 15th. The patient had been in labour four days, and three days had elapsed since the membranes had ruptured. Delivery was blocked by a large tumour. The operation lasted a few minutes over an hour, and was unattended with complications. The pedicle was treated by the extra-peritoneal method. The patient died in collapse the day after the operation.

## DIABETES IN THE DOG.

DR. PASQUALE FERRARO has recently (*Il Morgagni*, February and April, 1885) conducted a research on the comparative pathology of diabetes, in the anatomical institute of the University of Naples, under the direction of Professor Schrön. It results that diabetes mellitus may develop spontaneously in the dog, and gradually intensify until it becomes fatal. The etiology, clinical course, and histological anatomy of the disease, are similar in the human and canine species.

AT the Worship-street Police-court on the 9th inst., it was stated that the main drain in a certain road had been opened up for repairs by the Metropolitan Board of Works. The work had proceeded very slowly, and the drain had been fully exposed for the past three months, which was considered by the dwellers in the road to be an exceedingly long time for the necessities of the case. For many weeks the stench arising from the open drain had been unbearable. The magistrate, in reply to a gentleman who asked if anything could be done by the court to protect the inhabitants of the neighbourhood, stated his belief that the Board are liable to indictment for culpable delay, and advised that a solicitor be consulted.

THE King of Greece has recently conferred on Dr. Morris H. Henry, of New York, the Gold Cross, and created him an officer of the Royal Order of the Saviour. The honour was conferred for services rendered to medical science, on the recommendation of the Faculty of the University of Athens.

AT the forthcoming meeting of the British Medical Association, to be held at Cardiff on July 28th, 29th, 30th, and 31st, 1885, it is arranged that two subjects of considerable practical interest shall be discussed—namely, Mr. Treves (London) will introduce the subject of "Operative Interference in Intestinal Obstruction." Mr. Reginald Harrison (Liverpool) will read a paper introductory to a debate on "Bladder Tumours, their Diagnosis and Treatment." On the invitation of Dr. Bennett, the President of the Surgical Section, Professor Guyon of Paris has consented to be present and take part in the discussion on "Tumours of the Bladder."

AT the meeting of the Académie Royale de Médecine of Belgium, held on May 30th, Dr. Fleming, Principal Veterinary Surgeon to the Army, was elected a foreign correspondent. The Société Royale de Médecine et d'Hygiène Publiques has also elected him as a foreign correspondent. We are glad to learn that the health of Dr. Fleming is being gradually, though slowly, re-established, and that he is able to resume his important duties at the War Office.

A NEW edition of Dr. Murchison's work on Diseases of the Liver is in the press and will shortly be issued by Messrs. Longmans and Co. A new book by Dr. B. W. Richardson, entitled "The Work and Works on Health and Social Reform of Edwin Chadwick, C.B.," and a new work on "Children's Diseases" for popular use by Dr. C. West, will also be issued by the same firm in a short time.

ON the 4th inst. the medical officer of health for the Port of London obtained an order from the West Ham Police-court for the destruction of 463 carcases of sheep, 584 legs and shoulders of mutton, 70 pieces of beef, 20 bags of kidneys, &c., which were certified to be unfit for food. These formed part of the cargo of the steamship *Ruapehu*.

THE annual dinner of the Army Medical Department took place at the Holborn Restaurant on the 8th inst. Sixty-six officers, past and present, sat down, under the chairmanship of the Director-General. Sir William Jenner, who was to have been present as one of the guests, was unavoidably absent. A very pleasant evening was spent.

AN epidemic of cerebro-spinal meningitis appears to prevail in Dublin at present, and last week no less than eight deaths were recorded from the disease.

DR. WYCHERLY, High Sheriff for Cork, was knighted last week by Earl Spencer for his services in connexion with the recent visit of the Prince of Wales.

DR. JAS. J. L. RATTON, Surgeon-Major, Madras Army, has been appointed Professor of Surgery and Senior Surgeon at the General Hospital at Madras.

A CONVERSAZIONE will be held at the Royal College of Physicians, Pall-mall, on Wednesday, July 1st, at 9 P.M.

MR. VICTOR HORSLEY has been elected an Assistant Surgeon to University College Hospital.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC.—The Prince of Wales has fixed Saturday, July 4th, for the ceremony of opening the Albany Memorial and other buildings of the hospital in Queen-square. The Prince and Princess Christian have signified their intention to be present, and the Archbishop of Canterbury will take part in the proceedings.

## THE METROPOLITAN HOSPITALS.

As the result of inquiries we have recently instituted, we are able to state that the following metropolitan institutions are, amongst others, at the present time hampered in their sphere of usefulness by want of funds.

In the City Orthopædic Hospital there are three wards, recently furnished, with twelve beds, which cannot be used. The applications for admission to these wards on behalf of helpless little cripples are very numerous, and it is most distressing that they should have to be refused. The committee were three years appealing for funds to open and complete these additional wards. At the British Lying-in Hospital, Endell-street, some thirty more patients per annum could be received did funds permit. At the Royal Orthopædic Hospital there are five beds vacant for want of funds. At St. Thomas's Hospital three wards, containing ninety beds, are closed. The Committee of the Hospital for Consumption and Diseases of the Chest at Brompton were compelled, to avoid closure of a ward, to sell out £2000 of their funded stock last year. At the Paddington-green Children's Hospital many cases are daily refused admission for want of more beds. If funds permitted additional accommodation could be obtained. At the Royal Westminster Ophthalmic Hospital there are twenty-eight vacant beds. At St. Mary's Hospital there are twenty-six beds vacant. At St. George's Hospital many applicants are refused admission for want of accommodation. At Charing-cross Hospital there are thirty empty beds. In the report which was presented at the meeting of the Governors of the North-West London Hospital on March 27th the committee state that hitherto all the beds and cots have been occupied, but that now the stern necessity of partially closing the hospital, unless additional help is forthcoming, must be faced. At the Hospital for Epilepsy and Paralysis the burden of debt is so heavy, and the necessity of immediately meeting some of the largest and oldest claims so urgent, that unless the public will enable this institution to place itself forthwith in an honourable and satisfactory position, the committee cannot feel justified in increasing or perpetuating the existing state of indebtedness, and will most reluctantly feel it their duty to close the hospital against all but paying patients. What this will entail upon the suffering classes concerned can only be fully known to those who are intimate with the distressing kind of diseases dealt with in this institution, diseases which cause the profoundest suffering both of body and mind, and often preclude the possibility of self-support. At the Poplar Hospital for Accidents there are no beds vacant from want of funds, but the number of beds will have to be reduced from want of cubic space, if funds are not forthcoming to build additional accommodation. As it is, the number of beds is insufficient to meet the demands made upon them. At the Chelsea Hospital for Women the "Albert Edward" floor of twenty beds is entirely vacant for want of funds. At St. Thomas's Hospital, in addition to the empty beds mentioned above, two wards have been, through lack of funds, appropriated to the use of paying patients; and at Guy's, too, a similar expedient has for the same reason been adopted. At the London Hospital, where the number of in-patients treated last year was no less than 8015, the number of beds is 797, and the average fully occupied during last year was 606. If the funds were larger more beds would be occupied, but there is no absolute rule that more than a certain number shall not be filled. In emergency, or in case of grave sickness, any person is admitted, it being trusted that the generosity of the public will supply the necessary funds. At this hospital there is a steadily increasing pressure as population increases, and as, indeed, it may be said with much regret the people become poorer. At the Evelina Hospital for Sick Children the committee have been compelled, in order to meet the deficit of the previous year, to trench upon the small invested capital of the hospital to the extent of £1000. Notwithstanding this sacrifice the balance-sheet shows a considerable deficit on the past year. At the London Lock Hospital and Asylum there are about fifty beds vacant from want of funds in the female department. At the London Fever Hospital, though no beds are unoccupied through lack of money, the isolation block, a most useful and necessary part of the establishment, is unused for that reason. At University College no beds are vacant, but the committee are obliged to depend upon the public and upon loans from their bankers to tide over their immediate pressing necessities. The debt of the hospital at the present time is over £7000.

It may be added that at St. Thomas's Hospital 79,019, and at the London Hospital 64,598 out-patients were treated last year, and that the total number of beds at the hospitals which derive benefit from the Hospital Sunday Fund is about 8000.

## THE SANITARY CONFERENCE AT ROME.

SINCE our last issue the proceedings of the Technical Commission have been placed on a much more satisfactory footing. All the work is now submitted to sub-committees which hold morning sittings and prepare definite series of propositions, and these are then discussed and voted on separately by the full assembly. A record of the proceedings of last week's work will, therefore, be made more conveniently under the heading of each separate piece of work.

First came the report of a committee consisting of Drs. Eck, Hofmann, Thorne, Semmola, Koch, Proust, and Sternberg on Disinfection, and after discussion its provisions were accepted with only a few verbal alterations. The committee, desiring simplicity above all things, recommended for purposes of disinfection only three measures: (1) by steam under pressure, a system specially adapted to steamers; (2) carbolic acid or chloride of lime as chemical agents; and (3) efficient aeration; and they then entered into details as to the various methods of applying these agents to different objects and under varying circumstances. The report is one which is in the main fully in accord with the principles held in England, and it received the support of the English and Indian delegates.

Another sub-committee, consisting of Drs. Buonomo, Eck, Hunter, Koch, Lewis, and Zaëros Pacha, prepared a report on the measures to be adopted in connexion with the Pilgrimage to Mecca. The constitution of the committee will at once show that the interests of our great Indian Empire were well represented, and it is not too much to say that the report submitted was, up to the point of entrance of the pilgrims into the Red Sea, in the main an adaptation of the excellent sanitary regulations which have long been enforced in India. On some points India has not yet felt it right to interfere with religious convictions; but now that it appears from the statement of the Turkish delegate that the Mussulman creed is in no way affected by a requirement that no pilgrim should be allowed to start on his journey unless he can show that he possesses adequate means for the journey, it is much to be hoped that this very important condition will be universally acted on. Such a step will result in the saving of much life. As regards the measures to be adopted in the Red Sea, the delegates from this country assented to the propositions of the committee. It had several times been urged, as for example by Sir Guyer Hunter, that each country should be allowed to act on its own views as regards arrivals in its own ports, and hence where Turkish ports in the Red Sea were concerned, it was explained by Sir Joseph Fayrer that whilst he and his colleague thought that many of the restrictions imposed were needless and hence vexatious, yet that no opposition would be offered by delegates from this

country. The assistance given to the Conference by Dr. Lewis's wide knowledge of this special subject was evidently of influence in securing a report which was accepted almost without modification.

Next came a report from a sub-committee as to the action necessary in ports of arrival, and, as in the case of the Red Sea Commission, we may congratulate ourselves that it contained no English blood amongst its members. So hopelessly had the committee tried to win both sides that the report was utterly rejected, and the committee were sent back to their labours. The next report they submitted was a substantial advance on the first. It gave free admission to a certain class of vessel even from so-called suspected ports, provided a medical inspection showed that after a certain length of journey there had been no illness, and that all needed measures of cleanliness, &c., had been observed. But if the journey had lasted less than ten days, all the crew and passengers had first to be kept under observation for twenty-four hours. As to infected ships, the sick were very properly to be landed and isolated, but this, too, was coupled with a regulation enjoining a period of from twenty-four hours to five days' observation for all on board if during any part of the voyage any person was suspected of having had cholera. This detention of healthy people was protested against by Dr. Thorne, who maintained that the English system of detaining only persons actually suspected of being ill for a period sufficient for the symptoms to develop themselves was ample. He was supported by all his colleagues from this country; but in view of the notions prevailing on the Continent, they were necessarily in a minority. Then came a genuine *fiasco*. What was to be done with the people who were landed? A committee, composed of such men as Drs. Koch, Baccelli, and Rochard, had actually prepared four propositions as to douching and bathing them. The ridicule cast by the Indian and British delegates on such a proposal secured them a strong following; and when, finally, Sir Guyer Hunter asked the committee to explain how they would bathe and douche nearly 2000 men, women, and children on board our great troopships, the committee thankfully accepted a suggestion that all the four propositions should be erased, and they were at once struck out as fit only for the waste-paper basket. As a general principle, the delegates from this country voted in the negative as to the imposition of quarantine of the healthy, whether under the name of observation or not, and then declined to take part in any divisions that took place as to the details relating to those measures.

Passing over certain matters of minor importance, the subject of the proceedings to be adopted after landing was dealt with by another sub-committee, composed of Drs. Sonderegger, Buonomo, Thorne Thorne, Eck, Ruysch, Grozs, and Hofmann. The report presented by this sub-committee was, like others where English and modernised views were represented, a valuable one, and, with the exception of the circumstance that it was regarded by Dr. Koch and others as entering into certain details which it would be better to leave to each country, it was practically accepted as a whole. English views were represented in its first paragraph, which claimed that the prevention of cholera was, above all things, to be dealt with by the sanitary development of a country and means of isolation, all of which should be ready in advance. This point was enforced by Dr. Thorne Thorne, who explained that in her action against quarantine England was not influenced by pecuniary motives, and that her authorities had since the date of the Vienna Conference spent over £27,000,000 in the interests of human life and health; and he showed by statistics of mortality how truly remunerative this expenditure had been. He added that it would be a lamentable day for England if she should ever think of changing such a system for the useless five days' quarantine which seemed to find such favour with the Conference. Following on a series of resolutions as to sanitary organisation, notification of first cases, &c., all of which are excellent, came certain details as to international trains, their inspection and cleansing, the provision of means of temporary isolation at stations, &c. Our delegates found no difficulty in accepting these on the ground that measures of precaution and cleanliness were always valuable; but Dr. Timothy Lewis explained to the Conference that the construction of railways in India had in no way altered the ancient lines of cholera diffusion, and Dr. Koch and others considered some of the details proposed as to train service quite superfluous. Sir Joseph Fayrer gave some valuable statistics as to the effect of sanitation in India, urging the Conference to put their trust in these rather than in detailed regulations as to traffic; and he was supported by Sir Guyer Hunter, who reverted to details bearing in the same direction which he had given at a previous sitting.

The work of the Technical Commission came to an end on Saturday last, and since the full Conference did not again assemble till Thursday, the Government have asked the delegates to be the guests of the State during a visit to Naples, special trains, and a man-of-war in the bay, being provided by the Government.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In twenty-eight of the largest English towns 5892 births and 3497 deaths were registered during the week ending June 6th. The annual death-rate in these towns, which had been equal to 21·1 and 21·0 per 1000 in the preceding two weeks, further declined last week to 20·5. During the first nine weeks of the current quarter the death-rate in these towns averaged 21·8 per 1000, against 22·6, the mean rate in the corresponding periods of the nine years 1876-84. The lowest rates in these towns last week were 10·0 in Brighton, 10·9 in Norwich, 13·2 in Wolverhampton, and 13·5 in Halifax. The rates in the other towns ranged upwards to 25·5 in Preston, 26·3 in Birkenhead, 31·0 in Newcastle-upon-Tyne, and 33·6 in Manchester. The deaths referred to the principal zymotic diseases in the twenty-eight towns, which had been 510 and 487 in the previous two weeks, rose to 521 last week; they included 224 from measles, 130 from whooping-cough, 32 from diarrhœa, 37 from small-pox, 44 from "fever" (principally enteric), 23 from diphtheria, and 31 from scarlet fever. No death from any of these zymotic diseases was recorded last week in Brighton, Norwich, or Halifax; whereas they caused the highest death-rates in Sheffield, Manchester, and Newcastle-upon-Tyne. The greatest mortality from measles occurred in Birkenhead, Sheffield, Manchester, and Newcastle-upon-Tyne; from whooping-cough in Cardiff, Plymouth, and Blackburn; from scarlet fever in Leicester, Sunderland, and Cardiff; and from "fever" in Portsmouth and Newcastle-upon-Tyne. The 23 deaths from diphtheria in the twenty-eight towns included 15 in London and 2 in Hull. Small-pox caused 59 deaths in London and its outer ring (exclusive of 28 recorded in the metropolitan asylum hospital ships and camp at Darenth), 2 in Manchester, and 1 in Hull. The number of small-pox patients in the metropolitan asylum hospitals situated in and around London, which had steadily increased in the preceding ten weeks from 830 to 1389, declined to 1201 at the end of last week; the admissions, which had ranged between 354 and 211 in the previous five weeks, fell to 180 last week. The Highgate Small-pox Hospital contained 68 patients on Saturday last, 19 cases having been admitted during the week. The deaths referred to diseases of the respiratory organs in London, which had been 291, 305 and 302 in the preceding three weeks, declined last week to 290, but exceeded the corrected weekly average by 20. The causes of 90, or 2·6 per cent., of the deaths in the twenty-eight towns last week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Portsmouth, and Brighton, and in five other smaller towns. The largest proportions of uncertified deaths were registered in Oldham, Sheffield, Blackburn, and Bolton.

### HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been equal to 23·4, 21·2, and 20·5 per 1000 in the preceding three weeks, rose again to 21·8 in the week ending 6th June, and exceeded by 1·3 the mean rate during the same week in the twenty-eight large English towns. The rates in the Scotch towns last week ranged from 12·2 and 16·5 in Leith and Aberdeen, to 25·1 in Glasgow and 25·4 in Greenock. The 532 deaths in the eight towns showed an increase of 32 upon the number in the previous week, and included 23 which were referred to whooping-cough, 16 to diarrhœa, 15 to measles, 11 to scarlet fever, 6 to diphtheria, 3 to "fever" (typhus, enteric, or simple), and not one to small-pox; in all 74 deaths resulted from these principal zymotic diseases, against 67 and

59 in the preceding two weeks. These 74 deaths were equal to an annual rate of 3·0 per 1000, which was 0·1 below the mean rate from the same diseases in the twenty-eight English towns. The fatal cases of whooping-cough, which had been 22 and 27 in the preceding two weeks, declined again to 23 last week, which included 12 in Glasgow, 6 in Edinburgh, and 3 in Dundee. The 16 deaths attributed to diarrhœa showed an increase of 6 upon the number in the previous week, but were equal with the number in the corresponding week of last year. The deaths from measles, which had been 19, 15, and 11 in the previous three weeks, rose again to 15 last week, of which 14 occurred in Glasgow. The 11 fatal cases of scarlet fever showed a considerable increase upon the numbers in recent weeks, and included 4 in Glasgow, 2 in Edinburgh, 2 in Leith, and 2 in Paisley. Four of the 6 deaths from diphtheria were returned in Glasgow. The 3 deaths referred to "fever" showed a decline from recent weekly numbers, and were considerably below the average number. The deaths referred to acute diseases of the respiratory organs in the eight towns, which had been 107 and 87 in the preceding two weeks, rose to 126 last week, and exceeded by 36 the number returned in the corresponding week of last year. The causes of 74, or nearly 14 per cent., of the deaths in the eight towns last week were not certified.

### HEALTH OF DUBLIN.

The rate of mortality in Dublin, which had been equal to 35·0, 31·2, and 25·7 per 1000 in the preceding three weeks, further declined to 23·1 in the week ending June 6th, and was considerably lower than in any previous week of this year. During the first nine weeks of the current quarter the death-rate in the city averaged, however, no less than 30·8 per 1000, the mean rate during the same period not exceeding 20·5 in London and 18·6 in Edinburgh. The 156 deaths in Dublin last week showed a further decline of 18 from the high numbers in recent weeks, and included 9 which were referred to measles, 2 to whooping-cough, 2 to diarrhœa, 1 to scarlet fever, 1 to "fever," and not one either to small-pox or diphtheria. Thus 15 deaths resulted from these principal zymotic diseases, against 34, 33, and 21 in the preceding three weeks; these 15 deaths were equal to an annual rate of 2·2 per 1000, the rate from the same diseases last week being 3·2 in London and 2·7 in Edinburgh. The fatal cases of measles in Dublin, which had been 17 and 13 in the previous two weeks, further fell to 9 last week, and were fewer than in any week since the middle of February last. The deaths from "fever" and from scarlet fever also showed a further decline from recent weekly numbers. Only one inquest case and 1 death from violence were registered within the city. Nearly a quarter of the deaths occurred in public institutions. The deaths both of infants and of elderly persons showed a further considerable decline from the numbers in recent weeks. The causes of 26, or nearly 17 per cent., of the deaths registered during the week were not certified.

## THE SERVICES.

Honorary Brigade Surgeon W. F. Ruttledge, now on retired pay, has been appointed to take charge of the 1st Infantry Brigade at Aldershot.

Thirty-five officers undergoing a course of instruction in Medical Staff Corps drill, &c., at Aldershot are attached for a course of instruction in riding, 20 to the Cavalry Brigade, 10 to the Royal Artillery, and 5 to the Commissariat and Transport Corps.

WAR OFFICE.—The Secretary of State for War has appointed Howard W. Hunt, Esq., M.R.C.S., to be Visiting Surgeon for Shorncliffe, under the Contagious Diseases Acts, 1866 to 1869, vice J. W. Howard, deceased.

ARMY MEDICAL STAFF.—Brigade Surgeon W. O'Halloran has retired on temporary half-pay; Surgeon John Sydney Langdon resigns his commission.

ADMIRALTY.—The following appointments have been made:—Fleet Surgeon Garland W. L. Harrison, to the *Britannia;* Fleet Surgeon Daniel O'Connor, M.D., to Devonport Dockyard; Staff Surgeon Fleetwood Duckle, M.D., to the *Duncan;* Surgeon James Porter, M.B., to the *Pembroke;* Surgeon John Cashin, to the *Duncan;* Surgeon Timothy J. Crowley, M.D., to the *Royal Adelaide.*

YEOMANRY CAVALRY.—Cheshire: George Harrison, Gent., to be Surgeon.

ARTILLERY VOLUNTEERS.—1st Northumberland and Sunderland:—William Henry Besant, Gent., to be Acting Surgeon.

RIFLE VOLUNTEERS.—1st Bedfordshire: Acting Surgeon Henry Frederick Holland, M.D., to be Surgeon.—10th Lanarkshire (Glasgow Highland): Angus Macphee, Gent., M.D., to be Acting Surgeon.—2nd Sussex: Walter Samuel Simpson, Gent., to be Acting Surgeon.—1st Volunteer Battalion, the Prince of Wales's Own (Yorkshire Regiment): Acting Surgeon Alfred Baker to be Surgeon.

# Correspondence.

"Audi alteram partem."

## ADDISON'S DISEASE.

*To the Editor of* THE LANCET.

SIR,—Dr. Wickham Legg, in his interesting communication to your journal on Addison's disease, says that the theory which makes it a tubercular affection of the suprarenal bodies must be given up. I am somewhat at a loss to know whether Dr. Legg is arguing solely against the opinion that the change usually found in the adrenals is strictly tuberculous, or whether he is denying the truth of the usually received theory of the nature of the disease, and which in common parlance is often spoken of as tuberculous. If Dr. Legg writes merely to maintain the former, I agree with him, but if the latter, I am sorry to find myself at variance with him. Addison's first published cases were examples of what was then called tuberculous disease, but the author did not state that this condition was characteristic of the disease; it was left for myself, by an accumulation of a large number of cases, to insist upon the fact, and therefore reduce morbus Addisonii to a very strict definition as regards the changes in the organs. I maintain that the disease was primary and of one kind. This view I further propounded in the article on Morbus Addisonii in Reynolds's System of Medicine. It was shortly as follows:—

In Addison's disease there is found a total destruction of the adrenals, the consequence of a primary or essential disease, which is comparable with that of the primary affections of other organs. In considering the diseases of other double organs, we do not refer to their accidental implication by new growths, but to the slow implication of their structure by a primary morbid process. Indeed, I know of no instance where both lungs would be involved to their destruction without a trace of similar disease elsewhere, or of a uniform implication of the kidney, and the rest of the body free. Were I, indeed, to meet with such cases, I should regard the disease as one essentially primary. In the same way, I have no knowledge of any adventitious disease attacking both adrenals to their destruction, and showing no trace of its existence elsewhere. From what I know of pathological processes, it seems to me that a disease involving the entirety of both adrenals, and leaving the rest of the body untouched by it, must be a primary affection of those organs. It would therefore not be tubercular. This fact, too, would also imply more—that the disease would be of a similar nature to that found in the other viscera, especially the double organs. Now, the slow process which gradually involves the parenchymatous structures is usually called inflammatory, and the same term may be with equal truth applied to the process which destroys the adrenals. The chronic primary affections of the lungs are of a similar nature to those seen in cirrhosis of the liver, and called interstitial hepatitis, or in the kidney, and called interstitial nephritis, or in the spinal cord, and styled sclerosis, the process being modified according to the structure of the organ. In the adrenals the organs may sometimes be found increased to three or four times their ordinary size, owing to the production of an albuminous material composed of fibre and cell elements. At a later period this material undergoes caseation, cretification, and softening, and at the same time the mass is much reduced in size, so that in very long-standing cases of morbus Addisonii, nothing but a few nodules of cheesy matter may be found, or a few grains of chalk, or perhaps a thimbleful

of creamy fluid. In looking at these cases it is evident that a few more months would have seen the whole of this morbid material disappear. This sometimes occurs, as in one of the best-marked cases of the disease which I have seen, the one referred to by Dr. Legg as presented to the Pathological Society by Dr. Eastes, and several other similar cases have been reported. I do not look upon this termination as surprising, but as inevitable, and I see no reason why the same should not occur in other organs if they were non-vital. The adrenals are not vital organs in the ordinary sense, seeing that persons live without them for many years, although it is equally true that when diseased they bring about death in a slow and insidious manner. We see the liver waste in the cirrhotic state, and, as regards the kidneys, we sometimes find them in Bright's disease reduced to their minimum size compatible with the existence of life. In the case of the thyroid, the glandular structure may altogether disappear, and as a result of inflammation of the testes every trace of the organ may have gone.

I would say therefore, in conclusion, that if Dr. Legg merely wishes to maintain that the affection of the adrenals so usually found in morbus Addisonii is not tubercular, I cannot but agree with him, having always insisted upon the same fact; but if his paper is written with the object of contravening the views which I have just stated, that the disease of the organs is essentially of one nature, and of that character which has mistakenly been called tubercular, then I am at variance with him. From a study of a large number of cases over many years I have formed the opinion which I have given, and I regard the cases which Dr. Legg has described as highly confirmatory of this view. His paper and remarks thereon are very interesting, and the truth can only be arrived at by a thorough criticism of this kind, but my conclusions drawn from his illustrations are, I am sorry to say, totally different from Dr. Legg's. He would say that, inasmuch as we sometimes see cases of Addison's disease where no trace of the adrenals can be found, the usual theory of their so-called tuberculous nature must be given up. I, on the contrary, would say that the total absence of the organs in very chronic cases proves to my mind indisputably that such process (so-called tubercular) and none other must have led to it.

I am, Sir, yours obediently,

Grosvenor-street, June, 1885. SAMUEL WILKS.

## TREATMENT OF ACUTE PERITONITIS BY ABDOMINAL SECTION.

*To the Editor of* THE LANCET.

SIR,—The abstract of Mr. Treves' paper on this subject, given in THE LANCET of March 14th, gives doubtless a complete view of that gentleman's opinions and action in the particular case narrated, though it does not contain anything more than a slight allusion to a previous work on the subject; but it is quite enough to convince me that he has taken an insufficiently wide grasp of this important advance in abdominal surgery, and that he is not aware of the fulness of the reception which has already been accorded to the practice which he suggests as being proper for cases of acute general peritonitis. So far as I know, the first record of an operation performed deliberately on account of acute peritonitis was proposed and carried through by Dr. Wiltshire in 1868. An account of the case will be found at page 294 of the recent edition of my book on Diseases of the Ovaries, where I say: "I think sufficient praise can hardly be given to Dr. Wiltshire for his courage in performing the operation under such urgent conditions, and it is not too much to say that to his success in this case we owe a new departure in the practice of abdominal surgery by which operations under acute symptoms are undertaken, and apparently with results as satisfactory as those obtained in cases free from emergency." This has long since become the established practice, and I should think that some scores of cases are now on record where it has been completely and successfully adopted.

It is now some twelve years since I myself for the first time followed Dr. Wiltshire's example, and after I had done so I naturally asked myself the question, Why should I limit my operations to cases of peritonitis in which the disease is complicated by an ovarian tumour? Since that time I have never allowed a patient to die of peritonitis without opening the abdomen, if I could obtain the consent of my colleagues and the patient's friends, and that consent has very rarely been withheld. The results of the great majority of these operations have been published in detail under various headings, because it has rarely been found that the cause of the peritonitis could not be ascertained, and under the head of the cause each case has been recorded, leaving only two instances in which the cause was not ascertained, and which were therefore recorded as operations for acute peritonitis. I have not made an accurate research into my record for the purpose of this paper; but I believe my statement is nearly correct when I say that I have opened the abdomen forty-four times on account of the presence of peritonitis, and that the operation has been completely successful in forty-one of the cases.

This leads me to say that Mr. Treves' case is open to a criticism on two points to which I desire to draw emphatic attention; because, though I give him most willingly all credit for the success of the case so far as it has gone, I think that success is due more to good luck than to good guidance. He tells us the patient was admitted to the hospital "on Jan. 21st, suffering from chronic pelvic peritonitis following severe gonorrhœa." Sufficient has been put upon record concerning this condition to make it perfectly certain that this patient was suffering from pyosalpinx; and if any further proof is needed, we have only to pass on two sentences, and find that the abscess was on the left side, where it always is if pus exists at all in the Fallopian tube. The case was clearly one of antecedent rupture of a suppurating tube, with the formation of a limited abscess, the secondary rupture of this abscess being the cause of the peritonitis. The first point of criticism is, therefore, that this patient ought to have been operated upon within three or four days of her admission to the hospital, and should not have been allowed to go on till Feb. 26th merely for the purpose of running the gauntlet of an attack of acute peritonitis. The second point of criticism is that Mr. Treves has not—at least he does not tell us that he has—removed the Fallopian tube. If the rent, which undoubtedly occurred in it, was sufficiently large and satisfactory to allow for a vent and the healing of the tube, then perhaps the patient may escape without further trouble. But the experience of those of us who have had a large number of these cases to deal with is that a case so incompletely treated as this will simply be the subject of further trouble by-and-by, when the removal of the tube will be a difficult and risky proceeding.

I am, Sir, your obedient servant,

Birmingham. LAWSON TAIT, F.R.C.S.Eng.

## AURAL EXOSTOSES.

*To the Editor of* THE LANCET.

SIR,—In answer to Mr. Dalby, I beg to state that I have never claimed any originality for the operation for the removal of aural exostoses. On the contrary, I have always mentioned the name of Dr. Arthur Matthewson[1] of Brooklyn, New York, as being entitled to all the credit that is due in this matter. Dr. Matthewson some years ago kindly sent me his pamphlet, in which he carefully describes his first case (1876), and from this paper I got my idea of the operation.

Mr. Dalby says that from 1874 he has employed the drill, and in 1876, in THE LANCET, he states, "The operation consists in grinding the bone away, and the most satisfactory appliance for this purpose I find to be the drill which is in common use among dentists." But he has not published any cases for our guidance describing the details of the operation, and I was certainly under the impression that Dr. Matthewson's was the first case. That I am not singular in this opinion, I would refer to the authors[2] indicated below, who in this connexion never mention Mr. Dalby's name, for they doubtless have all of them missed so brief a notice of what is really a tedious and capital operation.

In the last edition of Mr. Dalby's work, published this year,

[1] THE LANCET, July 20th, 1878; Jan. 8th and 15th, 1881; Jan. 31st and April 1st, 1882; and May 30th, 1885; and British Medical Journal, Nov. 24th, 1883.

[2] Roosa: Treatise on Diseases of the Ear, sixth edition, p. 486. Barr: Diseases of the Ear, p. 213. Buck: Diagnosis and Treatment of Ear Diseases, p. 113. Macnaughton Jones: Aural Surgery, p. 12. McBride: A Guide to the Study of Ear Diseases, p. 46. Politzer's Text-book of Diseases of the Ear, p. 622 (Cassell). Burnett: A Treatise on the Ear, second edition, p. 396. Cumberbatch: St. Bartholomew's Hospital Reports, 1880. Pomeroy: Diseases of the Ear, p. 117.

he tells us nothing that adds to our knowledge, except, he says, that at the International Medical Congress held in London, Aug. 1881, "I called attention to the fact that in a very large proportion of these cases the subjects of the growths had been for many years addicted to sea-bathing." A fact that I was the first to demonstrate at least six months before.[3]

Mr. Dalby was present on one occasion when I operated, and in three of my cases of aural exostosis I had the advantage of a consultation with him.

I am, Sir, yours truly,

Lower Seymour-street, June, 1885. GEORGE P. FIELD.

## ON ACQUIRED IMMUNITY FROM INFECTIOUS DISEASE.

*To the Editor of* THE LANCET.

SIR,—While Dr. Sternberg, in his paper entitled "What is the Explanation of Acquired Immunity from Infectious Diseases?" in THE LANCET of April 11th and 18th of the current year, does not directly claim originality for the "vital resistance theory," a claim is at least implied by his statement that his work antedated that of Grawitz and Salmon. Dr. Sternberg's paper was read at the meeting of the Clinical Society of Maryland held on Dec. 5th, 1884. In it he bases his claim to priority upon a paper published in the *American Journal of the Medical Sciences*, April 1st, 1881. In the discussion which followed, I had the honour to show that at the annual meeting of the Medical and Chirurgical Faculty of Maryland held in April, 1875, I had read a paper (published in the Transactions of the Faculty for that year) in which the theory of immunity expressed by Dr. Sternberg in his paper was distinctly and explicitly propounded. This was publicly admitted by Dr. Sternberg at the meeting at which his own paper was presented. As Dr. Sternberg, while mentioning those who followed him, has neglected to refer, even in a footnote, to my publication antedating his own by six years, I beg that you will favour me by printing the enclosed extract from my paper, a reprint of which I have also the honour of sending.

I am, Sir, your obedient servant,

University of Maryland, Baltimore, May 5th, 1885. J. E. ATKINSON, M.D.

*Extract.*

"It has been stated that all the parts of the tissues of the body whose molecular motion was such that the consequence of their union with the contagious particles was to degrade them until they were unfit for their normal functions were thrown off from the body, and that there were left behind only such portions as were able to repel the contagia, or, having united with them, were able, while undergoing a certain modification themselves, to also modify the life of the contagia, so that the union would result in matter, somewhat altered it is true, but not to such an extent as to interfere with the performance of proper normal function. The body will thus have gotten rid of all matter capable of being degraded by the contagium of the given specific fever. In the course of the subsequent nutrition of this individual, there must be a constant and almost unvarying supply of new material introduced from without. It has been seen that within the system, and endowed with life, this material is termed protoplasm. Now the mere fact of proteinaceous compounds gaining access to the circulation does not confer upon them the properties of this protoplasm. ..... On the contrary, it must be that, as these matters enter the circulation, they may not attain the dignity of protoplasm until life shall have been conferred upon them by their incorporation with the protoplasm already existing in the body, with the buds and gemmules split off from the larger masses, and which, thus nourished, increase in size and develop the properties of their progenitors. Understanding, then, that these buds and gemmules are all descended from the protoplasm that has already resisted or been modified by the especial contagium particle, it is perfectly evident that they and their descendants must possess the same qualities of resistance. At the same time, it will not be difficult to imagine that this condition, being one opposed to the perfectly normal life of the cells of the body, may after a time, in consequence of a steady and persistent struggle to regain the condition enjoyed before infection, be receded from, and the individual again acquire his susceptibility to the same eruptive fever that he has already experienced. In the same manner may we account for the fact that the occurrence of the diseases in the parent does not necessarily or usually confer immunity upon the offspring; that a certain protection is conferred we know, since the eruptive fevers almost always produce their most dire effects upon virgin populations. The history of epidemics in the Pacific Islands exemplifies this. It is even probable that several diseases, the causes of dreadful mortality in centuries gone by, have disappeared in consequence of an immunity gradually inherited. In spite of this, however, it is very probable that in the reproductive processes the inheritance of perfectly normal molecular motion tends to reassert its superiority over that of a recently acquired modified motion, and that it returns to the mode of life that appertained to the parent previous to the occurrence of the eruptive fever, just as the parent would return, and sometimes does, were his vital processes as active."

[3] THE LANCET, Jan. 8th, 1881.

## HEALTH ASSURANCE ASSOCIATIONS.

*To the Editor of* THE LANCET.

SIR,—As imitation is the sincerest flattery, I suppose I ought to feel flattered by the fact referred to in your leading article of the 30th ult., that no fewer than three of these associations have been started within the last few months. I do not feel flattered however, I am simply grieved—not because of the fact that these societies have adopted my scheme as far as they can, and one of them has even appropriated the name which I have given to the system without the slightest acknowledgment, but at the misapplication of the scheme, and at the further loss and damage which the profession in particular is sure to suffer if these associations are to be allowed to grow.

On what grounds are my objections based? On these:—The formation of an "Association" for the working of health assurance is not only absolutely unnecessary but positively mischievous—first, by increasing the cost of working the system; and, secondly, by taking the control of the fees out of the hands of the medical practitioner. These are two of the evils of the provident dispensaries, and in these new associations they will be greatly magnified.

First, the cost of working. Where are the expenses of rent of offices, salaries of the secretary and clerks, commissions of agents, and other disbursements to come from? Is it not clear that if the fee charged to an assurer for medical attendance be 20*s.* per annum, not more than 15*s.* will find its way into the pockets of the medical attendant? Why should medical fees be thus divided and the profession or the public robbed?

Secondly, the doctor's loss of control over his fees. That this is an evil only too real, the medical officers of provident dispensaries and the various amalgamated friendly societies can bear witness; but the evil is trifling in amount compared with what it will be if the promoters of these aggressive companies are to have their way. One would have thought that the profession had already learned a lesson on this point which would have made it jealous of its rights and duties for the future; but it seems the lesson has not yet been severe enough. I have elsewhere shown that the one remedy *par excellence* for the evils of clubs and many other evils besides is health assurance—not health assurance "associations." For the working of life assurance, and the various schemes of assuring against the losses of accident and sickness, associations are really necessary; but a serious blunder is committed if it be assumed that health assurance can be advantageously worked in the same way. Nor does the blunder affect the medical profession alone. One of the great advantages of health assurance is that the patient is brought into an intimate and friendly relation with his client, in whose health he becomes interested from the moment when the first fee is paid, and he has many and regular opportunities—at the periods of payment for example—of seeing the assurer and his dwelling, observing his state of health, advising him thereon, and detecting the beginnings of disease. Is this a picture of the state of things likely to obtain under a middleman, *alias* an "association"? If the medical profession persists in its policy of indifference and *laissez-faire*—which has already proved so disastrous—in matters so nearly concerning its best interests

and those of the public, of whose health it ought to be the custodian, the punishment will be as certain as it will be richly deserved.—I am, Sir, yours truly,

W. FLEMING PHILLIPS.

St. Mary Bourne, Andover, Hants, June 6th, 1885.

## "SINGULAR MEDICAL EVIDENCE."

*To the Editor of* THE LANCET.

SIR,—Under this "singular" heading I was astonished to see a notice in your issue of June 6th of an article which appeared in the *Echo* regarding the medical evidence given at an inquest held in Poplar on May 28th. I may state briefly that the *Echo* has given an entire misrepresentation of the whole matter. In the first place, there was no "fatal fight at Poplar" at all; and, in the second place, I did not say what in the account referred to I was reported to have said.

The facts are simply these:—An old man was peacefully driving a barrow along the road, when a drunken man, an utter stranger, rushed up, struck him heavily under the jaw so that he fell backwards, striking the back of his head with great violence on the ground, and was picked up dead. On making a post-mortem examination, I found the cause of death to be cerebral hæmorrhage from the violence of the concussion, well-marked atheroma of the vessels greatly predisposing to the result. I found also advanced renal disease and cardiac hypertrophy. In describing the skull and brain appearances, I mentioned that on removing the skull-cap quite an unusual amount of thick fluid *escaped* from the sinuses, &c. I could not measure it, as most had oozed out, but my assistant and myself roughly estimated there might be nearly a pint; however, I could form no exact estimate of the amount. I subsequently went on to describe the usual signs of cerebral hæmorrhage which I found.

I can only ascribe the insertion of the article in question to lack of sensational matter, but I do not feel particularly ambitious to be chosen as the subject of such fictitious reports.

I am, Sir, your obedient servant,

W. MURRAY LESLIE, M.B., C.M.Edin.

Cubitt Town, E., June 10th, 1885.

*** We do not see that our correspondent has any material ground of complaint, as our remarks practically agree with his own version of the matter.—ED. L.

## MANCHESTER.

*(From our own Correspondent.)*

### CHARITY ORGANISATION IN MANCHESTER.

At the last meeting of the Manchester Statistical Society a paper of considerable interest to the profession was read by Mr. F. Scott upon Charity Organisation in this city. He stated that the total sum received annually by forty-two voluntary institutions was nearly £150,000, and that, comparing this sum and the machinery provided therewith, the total results were much below what they might be if the various charities were working more or less together. He pointed out that this was especially the case with the hospital charities. Economical administration would be largely promoted by co-operation. He suggested that a kind of federal council should be formed, made up of representatives elected by the subscribers to the different institutions, which council should be subdivided into committees and subcommittees, to superintend the details of the working of each charity, such committees to report to and be controlled by the general council, whilst the main body would legislate and control all matters of common interest. The debate was carried on by a number of gentlemen interested in our charities, amongst whom was the Dean of Manchester, who gave it as his opinion that our organisations were worked too much on the lines of competition, that by too much subdivision there was a loss of power, and that much good would be effected by more combination amongst them.

### THE FORTHCOMING CONFERENCE AT BLACKPOOL.

At a preliminary meeting of representatives of Boards of Guardians, held last week in the Town Hall, to consider the programme for the conference to be held at Blackpool, the Lunacy Laws Amendment Act was under discussion, and it was noted with satisfaction that the Lord Chancellor had made several important amendments in the Bill, which had brought it into more harmony with the views of various boards of guardians who had made representations concerning the unworkable nature of some of the clauses. There has lately been some little trouble in dealing with pauper lunatics here; hitherto it has been the habit of the magistrates to remit pauper lunatics to the workhouse, where they were kept for a time under observation, and, if confirmed lunatics, were then removed to an asylum. The master of the Manchester Workhouse has, however, lately notified to the guardians that he must in the future refuse to admit lunatics to the workhouse, it being illegal to do so, nor have the magistrates power to order them there. Amongst the subjects set down for discussion at the coming conference at Blackpool is that of hospital accommodation for infectious diseases, and as most of the rural sanitary authorities are formed from boards of guardians, it is one that may be discussed there with considerable advantage.

### THE SALE OF HORSE-FLESH.

For some little time past disquieting rumours have been abroad as to the illicit sale of horse-flesh, and the subject has occupied the attention of both the Salford and Manchester Town Councils. At the last meeting of the latter, it appeared that certain regulations which the Market Committee had contemplated putting in force with a view to check this imposition on the poorer classes had failed to receive the sanction of the Local Government Board, on the ground that the power sought by the Corporation was not merely an amendment or addition to any existing Act, but was virtually new legislation, for which there was no precedent.

### DEATH OF DR. THORBURN.

Again we have to mourn the loss of one of the leaders of the profession in the comparatively sudden death of Dr. Thorburn. His loss will be felt among a large number in and around Manchester; his genial kind-hearted disposition had endeared him to students, colleagues, and patients. By his death another gap has been made in the professorial staff at Owens College, where he occupied the chair of Obstetrics and Diseases of Women. At the infirmary a vacancy is also caused, where he held the post of Obstetric Physician. It had for some time been known to his friends that he suffered from heart disease, but none suspected the end was so near. Pulmonary thrombosis suddenly laid him low, and he died in little more than a week from the first onset. The continuation of the course of lectures he was engaged on at the College has been arranged to be completed during the present session by members of the staff of St. Mary's Hospital.

### SIR HENRY ROSCOE.

It is not improbable that ere long the College will lose the active services of another old and valued professor, Sir Henry Roscoe, who has been asked to become a candidate for parliamentary honours at the ensuing general election. Should he be elected, his time available for College work will necessarily be very limited; but his presence in the House of Commons would undoubtedly be a great acquisition to the scientific element, which at present is too scantily represented there.

### SMALL-POX.

The outbreak of small-pox which occurred here some few weeks since has not assumed very large proportions, and so far the authorities have had no difficulty in providing sufficient hospital accommodation. Up to the present time the cases have chiefly arisen in Manchester, and the bulk of these in the northern part of the city. Very few cases have as yet occurred in the neighbouring borough of Salford.

At the last meeting of the Chorlton guardians tenders were received for the extension of their hospital at Withington, to the amount of nearly £15,000.

Manchester, June 8th.

## NORTHERN COUNTIES NOTES.

*(From our own Correspondent.)*

### NEWCASTLE CATHEDRAL NURSING SOCIETY.

THE second annual meeting of the Cathedral Nursing Society has been held. This Society does a large amount of good in a quiet manner amongst the sick poor in the way

of supplying nurses, suitable invalid food, and appliances necessary in the sick-room; and this is done irrespective of religious denomination—principally, too, on the recommendation of medical visitors. It has dispensed during the past year 5255 pints of beef-tea, 8460 pints of milk, 528 chop dinners, 342 fish dinners, and 1621 meat dinners. The number of persons nursed has been 1171; supply of night-nurses, 195. Most of the persons nursed have been out of work during the winter. In some cases the patients cheerfully contributed to the funds of the Society.

### A MEDICAL MAN ATTACKED BY A HORSE.

Our papers give a circumstantial account of a savage attack on a medical man by a horse. Dr. Richards, assistant to Dr. W. Renton of Shotley Bridge, Durham, in attempting to mount his horse on leaving a patient's house, the animal resisted, and attacked him in a savage manner with its teeth. Dr. Richards struck it several blows with his stick, but, notwithstanding, the animal succeeded in thrusting him into an enclosed yard, where it again attacked him in a most vicious manner, tearing his clothes and fracturing his arm. A passer-by rushed at the horse with a heavy block of wood, and succeeded in beating it off. I am glad to hear that, with the exception of the fracture, Dr. Richards's injuries are not serious.

### THE MEASLES EPIDEMIC IN THE NORTH.

The course of the epidemic of measles in Sunderland shows a steady waning, but has made progress in Newcastle. During the last month (May) the increase has been very marked in the latter town, while in Sunderland during the same time there has been more than a corresponding decline. Some of the large towns on the Tyne, such as Jarrow, as well as the smaller mining and manufacturing villages, have suffered very severely. Lately the weekly mortality of Sunderland from all causes has fallen to 18·6 per 1000.

### LUNATICS IN HARTLEPOOL WORKHOUSE.

At the last meeting of the Hartlepool Board of Guardians, Mr. Cleaton, one of the Commissioners in Lunacy, sent in a report upon his recent visit to the workhouse. It set forth that there were eighteen imbecile and insane patients, nine of each sex; one admitted on April 23rd was in a strait waistcoat, and was suffering from acute insanity, and quite unfit to be under workhouse care. A woman suffering from acute mania, it was pointed out, was scarcely fit to be in a workhouse. Another case required constant watching. The accommodation for these classes was quite inadequate. The clothing, too, of the imbeciles was unsatisfactory. The Local Government Board also sent some extracts from the report of the Poor-law inspector complaining of the bedding of the female imbeciles. The clerk to the guardians had been directed to state in reply that there were now no more cases than the wards were certified to accommodate.

### LUNACY APPOINTMENT.

The Lord Lieutenant of Ireland has appointed Dr. A. Finegan to succeed Dr. Norman as resident medical superintendent of the District Lunatic Asylum at Castlebar. Dr. Finegan is well known in the north of England, having been for some time assistant medical officer in the Northumberland County Asylum at Morpeth.

Newcastle-on-Tyne, June 10th.

## EDINBURGH.

*(From our own Correspondent.)*

### SPECIAL MEETING OF THE MEDICO-CHIRURGICAL SOCIETY.

A NEW departure in the meeting arrangements of this Society was made recently, when a special meeting was held for the exhibition of pathological specimens and the discussion of clinical cases of special interest. The meeting was largely attended, and the proceedings were of an unusually interesting nature. At the close, the President congratulated the Society upon the success of the experiment, and announced that a series of similar meetings will be held in future alternately with the ordinary meetings.

### NEW METHOD OF COMPRESSING THE SUBCLAVIAN ARTERY.

Dr. Joseph Bell exhibited the upper extremity of a patient in whose case amputation had been performed for extensive sarcomatous disease of the scapula. The hæmorrhage had been controlled by a method recommended to him by Professor Chiene, in which a curved steel skewer was passed from above downwards behind the subclavian trunks, and brought out in front through the pectoral muscles. Pressure was exerted on the vessels by an elastic tube applied as a figure-of-8 over the anterior part of the region transfixed, a firm pad intervening between the elastic tubing and the patient's skin. The method is similar to that used by the late Professor Spence in the case of the femoral artery in amputation at the hip-joint. In this case Dr. Bell found the method perfectly satisfactory, as the limb was removed with the loss of but two ounces of blood.

### ULCERATIVE ENDOCARDITIS.

Dr. Byrom Bramwell showed a series of microscopic sections of various tissues from cases of acute ulcerative endocarditis, stained by Gram's method. In all there was a most admirable demonstration of the micrococci present in this disease. Dr. Bramwell mentioned that some cultivation and inoculation experiments made in connexion with these cases had yielded as yet no positive results; but that he had little doubt as to the infective nature of the disease.

## PARIS.

*(From our Paris Correspondent.)*

### THE INTERNATIONAL SANITARY CONFERENCE.

FROM a conversation I have had with an English physician who has just come from Rome, where he had been to take part in the proceedings of the International Sanitary Conference, I have learned, but not with astonishment, that the Conference may probably break up without having materially increased our knowledge of the nature and prophylaxis of cholera, as the majority of the foreign members seem to be antagonistic to their English colleagues, for almost every proposition that emanated from the latter was pooh-poohed or so little heeded that it has been a question whether the British representatives should not withdraw from the Conference. Some concession has, however, been made as to the futility of quarantines, whether on sea or on land. But what astounded the members present was the affirmation made by an English physician to the effect that cholera was not imported from India, but that each epidemic that has occurred in Europe originated from local causes. There is, however, nothing new in this theory, for it will be remembered that M. Jules Guérin has entertained it, though almost alone, for nearly half a century.

### OLD SHOES AND CHOLERA.

*A propos* of cholera, the report of the Society of Hygiene of Milan draws attention to the influence of old shoes as a means of propagating the disease. When a person treads a soil more or less damp in a locality infected, there is every chance of his conveying the germs in the manner described.

### PLANTS IN BEDROOMS.

It is generally supposed that the presence of plants in a bedroom is prejudicial to the health of its occupants. This, it appears, is an error, for at a recent meeting of the Congress of Pharmaciens one of the members stated that plants, far from being hurtful, on the contrary, in disengaging ozone from the vapour emanating from them, render the atmosphere of a room in a state of humidity perfectly healthy; moreover, it is averred that ozone, in destroying the microbes, and thus purifying the air, is favourable to persons affected with pulmonary consumption. Hence the Congress recommended that, while bedrooms may be furnished with plants which disengage the most ozone, flowers should be eliminated from them, as they do not possess the same virtues as the plants.

### THE QUEEN'S BIRTHDAY.

Every year on the occasion of the Queen's birthday a grand dinner is given at the British Embassy. That for this year took place on Saturday last, when the principal members of the British Colony were present, the medical profession being represented by the Hon. Dr. Alan Herbert, Dr. Boggs, Dr. Loughman, Dr. Douglas Hogg, and Dr. Faure-Miller. Lord Lyons received his guests with his usual affability. His dinners are excellent, and his wines are reputed to be of the choicest kind and quality, yet his

lordship never partakes of the latter. He is most abstemious, and appears to enjoy the best of health.

THE ILLNESS OF M. ANATOLE DE LA FORGE.

M. Anatole de la Forge, Vice-President of the Chamber of Deputies, who was one of those who were struck with insolation at the funeral of Victor Hugo, and was rather seriously affected, as now, I am glad to say, out of all danger. M. Anatole de la Forge is one of those rare Frenchmen who are teetotallers. He told me that he has never taken a glass of wine since he was a boy, drinks nothing but water, and has always enjoyed very good health. He is now sixty-five years of age.

At its last meeting, the Paris Faculty of Medicine decided that the prize founded by M. Lacaze, of the value of 11,400 francs, and which is given every two years, will next be awarded in 1886 to the author of the best work on Phthisis and Typhoid Fever.

Paris, June 9th.

## EGYPT.

*(From a Correspondent.)*

THE examinations at the medical school mentioned in my last letter were concluded on May 23rd. The whole number of students was 147, consisting of 126 students of medicine, 4 of pharmacy, and 17 of midwifery. Of the medical students, 84 passed and 41 were referred to their previous studies for a year, while one was ill during the examinations. There were 20 students of the fifth and final year, of whom 16 passed, and these 16 will now undergo a competitive examination to elect 5 of their number as house-surgeons at £72 a year, while the remaining 11 will become unpaid dressers, and work in the native hospital. In twelve months' time the whole 16 will be again examined in order to receive their certificates to practise. The whole of the 4 apothecaries and 17 pupil midwives were passed by the examiners. Each class was examined by its own native professor, aided by an independent examiner, of whom there were the following eleven:—Dr. Abbate Pasha (President), Dr. Grant Bey, Dr. Murison, Dr. Milton, Dr. Sandwith, Dr. Hess, Dr. Engel, Messrs. Hooker and Sickenberger for pharmacy, and two natives. This is the first year that students have been subjected to the test of written papers and clinical examination in addition to the stereotyped *viva voce* of a quarter of an hour, during which the candidate repeats from memory in the exact words of the text-book all that he knows of the disease in question. Thus it happens that a subject approached from an unaccustomed point of view, a cross-examination on his own glib quotations, or a question requiring reasoning intelligence on the part of the candidate, usually baffles him effectually. This is even more noticeable among the girl students than the boys. It is wonderful, however, how much young men may learn who study anatomy without dissecting, and even without seeing other preparations than those of wax, who are taught organic without the rudiments of inorganic chemistry, who do no practical ward work, and who are entirely dependent on professors, some of whom have little or no interest in, or aptitude for, the lessons they deliver. No great hope can be entertained of this school of medicine until the scholars are taught a European tongue, but the slight reforms which have taken place during the last twelve months are sufficient to encourage those in Cairo who are unselfishly striving for the school's welfare.

Cairo, May, 1885.

## MEDICAL NOTES IN PARLIAMENT.

*Inoculation against Cholera.*

IN the House of Commons, on the 8th inst., Dr. Cameron asked the President of the Local Government Board whether his attention had been called to the report of a Committee of the Academy of Medicine and Surgery of Barcelona appointed to investigate Dr. Ferrán's system of protected inoculation against cholera; whether he had observed that, according to Spanish telegrams published in the newspapers, the Spanish Government on May 28th appointed a commission to proceed to the cholera-stricken district of Valencia along with Dr. Ferrán, with the view of testing his system; and whether, in view of the probable fleeting nature of the opportunity now presented for an investigation, and the trifling expense required for the despatch of a small commission to an accessible country like Spain, he would consider the propriety of at once nominating such a commission without awaiting the result of protracted negotiations with the Indian Government as to their bearing a portion of the cost.—Mr. Russell replied that attention had been called to the report referred to, but that the Local Government Board did not deem it necessary at the present time to despatch a commission on behalf of the Board with the view of investigating Dr. Ferrán's system of inoculation.

## ROYAL COLLEGE OF PHYSICIANS.

AT an extraordinary Comitia held on Thursday last, a communication was received from the secretaries of the British Association for the Advancement of Science in reference to the establishment of an International Scientific Association, and, in proposing that a preliminary scientific conference be held in London in 1888, asking for the co-operation of the College in promoting that object. It was felt, however, that the matter would be better left in the hands of the British Association.

The report of the Committee on the Lunacy Bill was received and adopted; as was also the report from the Croonian Trust Committee.

## ROYAL COLLEGE OF SURGEONS.

AT an ordinary meeting of the Council of the Royal College of Surgeons of England held on Thursday last, a unanimous resolution of condolence with Miss Arnott on the death of Mr. Moncrieff Arnott was passed. The nomination of Hunterian Professors was proceeded with, Messrs. Treves, Stewart, Brailey, and Alexander Hill being appointed. The nomination of Professors of Surgery was postponed. Dr. Wooldridge, of Guy's Hospital, was appointed Arris and Gale lecturer for the ensuing year. Mr. Bland Sutton, of the Middlesex Hospital, was appointed Erasmus Wilson lecturer.

A letter from Mrs. Cæsar Hawkins was read, offering a marble bust of her late husband, to be placed in the College. The bust was accepted, and the best thanks of the Council were voted.

It was proposed that the College take 100 copies of the autotype reproduction of the original manuscripts of lectures given by Harvey in and after the year 1616, and which have recently been discovered in the British Museum after having been lost for above 100 years. This proposition was agreed to.

A communication was received from Dr. Hickman, forwarding a memorial signed by more than 600 teachers, practitioners, and students of medicine, urging that the Royal College of Physicians of London and the Royal College of Surgeons of England be amalgamated, forming a Royal College of Medicine; and that this College of Medicine be empowered to grant the degree or title of Doctor of Medicine, giving the power to practise in medicine, surgery, and midwifery. The memorial was referred to the joint committee on the title of Doctor.

Thanks were voted to Mr. Marshall for the report of the General Medical Council which was received from him.

A letter was received from Dr. Hack Tuke, calling attention to the in many respects objectionable clauses 12 and 13 of the Lunacy Act Amendment Bill now before the House of Lords, and suggesting that a protest should proceed from the Council.

On the 8th of May, 1884, a resolution was adopted by the Council, that a meeting of the Fellows and Members be called every year, to which a report from the Council be presented; it was now resolved that a meeting be held in October, of which due notice shall be given, and at which the report of the Council be presented. A letter from the Association of Members, containing resolutions passed at their last meeting, was presented.

A communication from the secretaries of the British

Association for the Advancement of Science was received, asking the opinion of the Council as to the advisability of holding a Preliminary Scientific Congress in London in 1888, and also whether the Council would give facilities for the holding of meetings. The Council replied that it was not called upon to give an opinion as to the advisability of holding such congress considering its present information, but would be prepared to offer what facilities it could for promoting its success.

# Obituary.

## SIR WILLIAM MURE MUIR, M.D., K.C.B.

SIR WILLIAM MUIR, the late Director-General of the Army Medical Department, died on the 2nd inst., after a long illness. In the autumn of 1877 he first exhibited symptoms of the disease which ultimately killed him. At that time his life was in jeopardy from the effects of very severe intestinal hæmorrhage and hæmatemesis. He rallied, returned to his duty, and discharged it manfully to the end of his Director-Generalship in May, 1882. But the manifestations of abdominal disease in 1877 were but the indications of the beginning of the end, and Sir William Muir's most attached friends could not have wished to have seen his life prolonged after so lingering and protracted an illness. He had suffered at different times during his tropical service from the effects of climatic disease.

Sir William Mure Muir, K.C.B., late Director-General, Army Medical Department, received his professional education at the University of Edinburgh and at St. George's Hospital, London. He obtained the degree of M.D. Edinburgh University, and the diploma of the College of Surgeons, Edinburgh, in 1840.

Dr. Muir entered the service as an assistant surgeon on Nov. 22nd, 1842, and finally became Director-General in April, 1874. He served upon full pay for nearly forty years, of which twenty-four were passed upon foreign service, in the Mediterranean, Turkey, and Crimea, Mauritius, Bombay, Madras, China, North America, and Bengal. He landed with his regiment, the 33rd, at Old Fort, and continued in charge of it throughout the siege of Sebastopol, having been present at the Alma, Inkerman, sortie of Oct. 26th, and at the attacks on the Redan, and siege and fall of Sebastopol (medal and three clasps, Knight of the Legion of Honour and Turkish medal). In February, 1885, and again in September, he was specially recommended by Mr. Alexander, the principal medical officer of the Light Division, for promotion on account of the zealous and careful manner in which he performed his duty, both in Bulgaria during the ravages of cholera, and in the Crimea. With the exception of a few days' sickness on his first landing at Eupatoria, he never quitted his post. He was also recommended for advancement by Generals Simpson and Codrington. Dr. Muir subsequently proceeded with his regiment to Mauritius, and thence to Bombay, and served in the Indian Mutiny in 1857-58. He was selected as principal medical officer of the Expeditionary Force to China under Sir Hope Grant in 1860, and was mentioned in despatches (medal with two clasps and C.B.); and for the able manner in which he had conducted the medical duties of the Expedition he was specially promoted to the rank of Inspector-General.

In 1861 Dr. Muir was nominated to accompany the Expedition to North America in the *Trent* affair, and marched with the troops through Nova Scotia. He remained in North America upwards of five years. During the active operations of 1862-63 in the United States he paid several visits, as an amateur, to the army of the Potomac, and on May 14th, 1865, he proceeded, at the request of the British Government, to Washington, in view of reporting on the sanitary and field medical arrangements of the army. He visited all the principal hospitals, and the hospitals of the Confederate Army at Richmond, &c., and embodied the results in a very valuable report. He had the highest opinion of the American nation, of their energy, force of character, and fertility of resource, and always looked back upon his experience and upon the friendships he contracted in that country with the liveliest satisfaction

In 1868 he became principal medical officer of Her Majesty's British troops in Bengal, where he remained for upwards of four years, and was then selected as head of the Sanitary Branch of the Army Medical Department, London.

On the retirement of Sir Galbraith Logan, Sir William Muir was promoted to the post of Director-General for a term of seven years, from April 1st, 1874, which period was specially extended to May 6th, 1882.

On Dr. Muir's relinquishing his post in India for that of head of the sanitary branch of the War Office in this country, the Government of India expressed in very warm terms their appreciation of his services, and of the important assistance the Government had derived from his experience, advice, and practical suggestions. Lord Napier of Magdala also recorded his opinion of the very valuable character of Dr. Muir's services, and of the independence, honesty, and sound judgment he had always exhibited.

In 1868 Dr. Muir became honorary physician to the Queen, and in 1873 he was made a K.C.B., and awarded a good service pension in 1880.

There are two ways of speaking of the dead. One is the principle of "De mortuis nil nisi bonum;" the other and truer

> "Speak of me as I am; nothing extenuate,
> Nor set down aught in malice."

Sir William Muir would himself have shrunk from all exaggerated estimates of his ability and services. What was he, then? What did he seem to be to those who knew him well and who were honoured with his confidence and friendship? He was one of Nature's noblemen: he had an eminently handsome head, finely chiselled features expressive of intelligence and strength; he was large of heart and intellect, and there was nothing mean about him; he had great courage, independence of character, and directness of aim; he was not, like Admirable Byng, for example, a man of personal courage, but, where responsibility was concerned, calling for a council of war. With Sir William Muir the boldest was often the best policy, because it was the boldest. Once having pictured to himself the object to be attained, he never faltered. Through good report or evil report (and it was for years the latter) it was all the same; he could labour and wait, for he had that strength which comes partly of moral robustness of character, partly of intellectual conviction—qualities which characterised statesmen of a past age. United with this power, this self-reliance, there were great gentleness and naturalness, and these formed that personal charm which first attracted and then welded his friends to him. Of course he made enemies: no man of character and independence can do otherwise; but those who knew him best believed in him most. He did what he thought right, and no doubt estranged some of his friends by doing it; but he gave the public medical service the power of growth and development by an unflinching persistence in his policy. Most, if not all, have come to recognise that the usefulness of the Department has enormously increased with its increase of power. The indebtedness of the medical service to Sir William Muir is undoubted, and at his last public appearance at a departmental dinner he was evidently overcome by emotion at the ovation he received. No one could have held a more enviable position as a regimental officer than did the late Director-General in the earlier stages of his career. When he left the 42nd Highlanders, the commanding officer told him, to prevent disappointment, that he could not expect in another corps to have the same amount of influence; but in the 33rd Regiment he gradually won the respect and esteem of all, and his influence for good was universally acknowledged. Still, he always recognised that responsibility and power must go hand-in-hand, and he regarded the position of the medical service under the regimental system as inherently defective. What is best for the public service as a whole, he was never tired of proclaiming, is best for the medical service, and the only tenable ground for it to occupy. In everything appertaining to the sick and wounded soldier, to the hospital service and its administration, and to army hygiene, the medical officer should be supreme; and within the limits which were clearly defined and circumscribed by his sphere of duty, the medical officer should be endowed with authority in the interest of the soldier and the State. His experience had taught him that of all men the medical officer had the greatest sympathy with the private soldier; and that, next to the general in command, the principal medical officer of a force in the field had the greatest responsibility, but lacked the power to get his requirements fulfilled. What had been begun by his predecessors in the direction of the depart-

ment was consolidated and completed under his *régime*. He gave the medical service an autonomy. The Warrant of 1879, under the terms of which all army medical officers are serving at the present time, was unquestionably an enormous stride in advance of anything that had gone before it. If Sir William Muir erred, it was in favour of military efficiency, and in view of securing military success. Impressed with what he had seen of war on a vast scale in America and elsewhere, he had learnt the paramount importance of disencumbering a marching and fighting force of its sick and wounded and all unnecessary impedimenta, so as to leave the general free to make a rapid movement and inflict a prompt and decisive blow whenever and wherever this could be effected. By an irony of fate not at all uncommon in the world, the system was condemned by those in whose interest it was mainly designed. Still, he was right. When war comes upon this nation in earnest, and upon a scale compared with which our small campaigns will sink into insignificance, it will be seen that the provisions for such a war cannot keep pace with the requirements of a luxurious and selfish age.

Sir William Muir never lost sight of the true dignity of his calling; and, like all high-minded men, regarded the artificial glare reflected from military rank, dress, or titular distinction as nothing compared with the true light reflected from the scientific attainments of the members of a benevolent and dignified profession. Whatever may be the hankering of some after these things, progress and respect can only come from advancing knowledge and usefulness. All the public medical services have a common cause and a common calling, and are but a part of the great medical profession, the members of which have only to be true to themselves. Time will do the rest. What the late Sir William Muir accomplished will be regarded more and more highly as time goes on, because his work will go on developing, and the wounded in the field, the sick in our war hospitals, and those who have charge of them, will reap the benefit of his labours even after his name is forgotten.

### JAMES MONCRIEFF ARNOTT, F.R.C.S., F.R.S.

MR. JAMES MONCRIEFF ARNOTT, whose death recently occurred at his residence in Sussex-gardens, Hyde-park, was born at Chapel, Fifeshire, in 1794. He was educated at the High School and University of Edinburgh, in this latter institution commencing those professional studies which he subsequently continued in London, Vienna, and Paris. Mr. Arnott was one of the founders of the medical school of the Middlesex Hospital fifty years ago, along with Sir Charles Bell, Dr. Copland, Dr. Leighton, Dr. (afterwards Sir Thomas) Watson, and others, and for many years acted as surgeon to the Middlesex Hospital and North London Hospital. He was afterwards successively selected to occupy the chairs of Surgery in King's College and University College. In 1840 Mr. Arnott was nominated one of the Council of the Royal College of Surgeons; he was elected a Fellow in 1843, and later on became a member of the Court of Examiners of that body, of which he had twice been elected to the presidency. In 1860 he was elected representative of the College in the General Council of Medical Education and Registration of the United Kingdom. Mr. Arnott held the appointment of surgeon in ordinary to the late Prince Consort. The subject of our notice was in every sense of the word a truly great man, conscious of his abilities to assume the highest responsibilities of his profession, and most conscientiously discharging those duties when undertaken. He belonged to the epoch of British surgery when the old traditions were being sent to the winds, and is best remembered in actual surgical work as having successfully performed a then difficult plastic operation for ruptured perineum. His writings consisted chiefly of contributions to the Transactions of the Royal Medical and Chirurgical Society.

### JOSEPH BUNNY, M.D.

By the death, on the 30th ult., of Dr. Joseph Bunny, Newbury has lost one of its oldest and most respected inhabitants. He received his medical education at Edinburgh, Guy's, and St. Thomas's, and in 1823 obtained the degree of M.D. at the University of Edinburgh, having previously, in 1820, become a Member of the Royal College of Surgeons of England, and a Licentiate of the Society of Apothecaries. He commenced the practice of his profession in Newbury, and in 1839 was elected borough coroner, an office which he held until 1873, when he resigned. Dr. Bunny was a Fellow of the Obstetrical and Medical Societies of London, a magistrate for the borough, and held several other offices connected with local charities. He was the first hon. surgeon to the Newbury Dispensary, established in 1835, and performed the duties for ten years, after which he was hon. consulting surgeon until the year 1877. For some years past his health had been such as to gradually induce him to seek release from his practice and to take a less active part in public matters. The deceased had attained the age of eighty-six years.

## Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following Members, having passed the Final Examination for the Fellowship on May 28th, 29th, and 30th, and June 1st, were at a meeting of the Council on the 11th inst. admitted Fellows of the College:—

Barlow, John, Elmbank-crescent, Glasgow; Diploma of Membership dated Nov. 17th, 1874.
Penny, William J., Caledonia-place, Clifton, Bristol; Nov. 19th, 1879.
Galpin, George Luck, Great Marlborough-street; Nov. 18th, 1880.
Pedley, Frederick Newland, Finsbury-square; April 21st, 1881.
Bass, Frederick, Union-road, Jan. 18th, 1882.
Collier, Joseph, Manchester; July 17th, 1882.
Thring, Edward Thomas, Torrington-square; July 20th, 1882.
Voss, Francis Henry Vivian, Clapton-square; July 31st, 1882.
Worthington, Sidney, Pattenswelr, Enfield; Nov. 10th, 1882.
Saneyoshi, Yashuzumi, St. Thomas's Hospital; Jan. 24th, 1883.
Pigeon, Henry Walter, Royal Infirmary, Manchester; Jan. 26th, 1883.
Wynter, Walter Essex, Templecombe, Twickenham; Jan. 26th, 1883.
Vogan, James Norman, Hatchlands, Redhill; April 18th, 1883.
Paget, Stephen, Grosvenor-street; July 23rd, 1883.
Steedman, J. Francis, High Brcall Hall, Wellington; Nov. 13th, 1883.
Muspratt, Charles Drummond, Nightingale-lane; July 30th, 1884.

Three other candidates passed the examination, but two not having attained the legal age (twenty-five), and one not possessing a medical qualification, will receive their diplomas at future meetings of the Council when qualified. Seven candidates failed to reach the required standard, and were referred to their professional studies for one year.

Mr. Edward Albert Schäfer, M.R.C.S., F.R.S., will commence a course of three lectures on "Secretion" on Monday, the 15th inst., at 4 o'clock.

SOCIETY OF APOTHECARIES.—The following gentleman passed his examination in the Science and Practice of Medicine, and received a certificate to practise, on the 4th inst.:—

Shaw, Wm. Wright, M.R.C.S., St. Bartholomew's Hospital.

The following gentlemen also on the same day passed the Primary Professional Examination:—

William Gilmore Ellis and Percy John Rendall, St. Bartholomew's Hospital; John Elliotsen Pennington Sparrow, King's College.

THE Hull General Infirmary has received a bequest of £10,000.

THE second annual dinner of the Association of Public Sanitary Inspectors was held on the 6th inst.

DR. LEWIS A. STIMSON has been elected Professor of Anatomy in the University of the city of New York, to succeed the late Professor Darling.

THE epidemic of small-pox at Burslem is reported to be spreading; nearly forty persons are suffering from the disease, and several deaths have occurred.

ACCORDING to the *Calcutta Englishman*, Dr. Fraser has been shot in Borneo during an attack made by natives upon the expedition of which he was a member.

SUPERANNUATION ALLOWANCE.—Mr. G. Macdonogh, late medical officer for the Clapham district, has received a superannuation allowance of £80 a year.

AT the College of Surgeons on Tuesday evening last, a private conversazione was given by the President, Mr. Cooper Forster. About 1200 guests were present.

VACCINATION OFFICERS ASSOCIATION.—At the next meeting of members of this Association, to be held on June 20th, at 2.30 P.M., at the Charing-cross Hospital Medical School, Chandos-street, Dr. Robert Cory will read a paper on "Some Medical Facts relating to Vaccination, of which it is desirable Vaccination Officers should have more extended Knowledge." Remarks will also be made on "Duties devolving on Vaccination Officers during Epidemics of Small-pox."

ROYAL SOCIETY.—Sir Andrew Clark, M.D., Henry Hicks, M.D., Arthur Milnes Marshall, M.D., and Professor Sydney Ringer have been elected Fellows of the Royal Society.

SIR WATKIN WILLIAMS WYNN, Bart., M.P., has expressed his intention of erecting a cottage hospital at Ruabon, North Wales, to the memory of his uncle, the late baronet.

THE French Association for the Advancement of the Sciences will hold its fourteenth session at Grenoble from the 13th to the 20th of August, under the presidency of M. Verneuil.

ST. ANDREWS GRADUATES' ASSOCIATION. — The members of this Association will hold a conversazione on Wednesday evening next at the rooms in Chandos-street, Cavendish-square.

MIDDLESEX HOSPITAL STUDENTS' SOCIETY. — The members of this Society will hold a conversazione on the 25th inst., when Dr. B. W. Richardson, F.R.S., has consented to deliver an address on "Medical Poets."

THE VOLUNTEER MEDICAL STAFF CORPS.—By the permission of the Lord Mayor, a meeting will take place at the Mansion House on June 19th, at 3 P.M., with the object of furthering the interests of the Volunteer Medical Staff Corps.

HYDROPHOBIA.—On the 8th inst. two cases of hydrophobia were reported in Manchester, a man and woman having died of the disease at the infirmary. On the 7th inst. in Dublin twenty-one persons were bitten by two rabid dogs.

HANDEL BICENTENARY FESTIVAL.—This festival will be held at the Crystal Palace on the 19th, 22nd, 24th, and 26th inst. The rehearsal takes place on the first day, a performance of "The Messiah" on the second, selections on the third, and "Israel in Egypt" on the fourth.

UNIVERSITY OF OXFORD.—At a congregation held on the 4th inst. the degree of M.D. was conferred on E. Daly (University) and E. Jenkins (Trinity). Convocation has passed a decree conferring the degree of M.A. upon Arthur Thompson, M.R.C.S., Lecturer in Human Anatomy in the University Museum.

SANITARY INSTITUTE OF GREAT BRITAIN.—At an examination held on June 4th and 5th, twenty-five candidates presented themselves, nine as local surveyors and sixteen as inspectors. Certificates of competency were awarded to three candidates of the former class and to fourteen of the latter.

THE thirtieth annual festival of the Poplar Hospital for Accidents was held on the 10th inst., when it was stated that the number of in-patients admitted to the hospital during the past year was 612, the number of out-patients treated being 7289. During the evening subscriptions amounting to £1450 were announced.

SOCIETY FOR THE STUDY AND CURE OF INEBRIETY.—A meeting of this Society was held on Tuesday last at the rooms of the Medical Society, the President, Dr. Norman Kerr, in the chair. A paper was read by Dr. J. Muir Howie (Liverpool) on "The Treatment of Inebriety." The physical aspect of the disease in dipsomania was specially treated of. A discussion followed, in which Sir Edwin Saunders, Dr. Bridgwater, Dr. Longhurst, Mr. F. J. Gray, and Mr. H. R. Ker took part.

AT the St. Pancras Coroner's Court on the 8th inst., inquests were held on the bodies of four persons, and at the close of the inquiries the foreman of the jury entered a protest on behalf of himself and fellow-jurors against the disgraceful mortuary accommodation, or rather want of accommodation, in St. Pancras. A rider was appended to each of the verdicts, declaring that the present dangerous and unhealthy state of the mortuary, and the want of proper accommodation for the holding of inquests, showed that the St. Pancras Vestry had no consideration for the living and a total disregard of the dead.

THE ROYAL ACADEMY OF MEDICINE OF BELGIUM.—The following subjects have been selected for theses, and to the writer of the most meritorious essay on each a prize will be presented by this institution:—1. The determination by new experiments and applications the degree to which spectral analysis may be realised in the researches of forensic medicine and the medical police. 2. The experimental determination of the influence which desiccation exerts when employed as a means of conserving the simple vegetable medicaments. 3. The physiological effect of sanguineous depletion, either local or general; its indications and contraindications in the treatment of disease. 4. Description and critical review of the different methods of surgical dressing and of the antiseptic treatment of wounds and surgical affections. 5. The study of erysipelas, *charbonneux* or *rouget*, of swine, as relating to its causes, manifestations, lesions, prophylaxis, and treatment, and to establishing eventually its relations with carbuncular or bacterian diseases.

CITY-ROAD CHEST HOSPITAL.—On the 5th inst. a meeting was held at the Mansion House in aid of the fund for completing the new wing now being added to this institution. Last year as many as 7439 patients were admitted, and the numbers are constantly increasing. The special feature of the hospital is that beds are kept for the reception of persons presenting themselves for relief as out-patients who are suffering from acute and dangerous diseases of the chest of recent origin, and who cannot be properly treated unless immediately received as in-patients. The total income last year was £4424. For completing the extension the sum of £5000 is still needed.

ROYAL MEDICAL BENEVOLENT FUND SOCIETY OF IRELAND.—The following office-bearers have been elected for the ensuing year:—Committee: the Presidents of the Colleges of Physicians and Surgeons, E. Adrien, L. Atthill, J. T. Banks, J. Hawtrey Benson, E. Bennett, D. Brady, E. Brunker, Henry G. Croly, B. G. Darley, J. Denham, G. F. Duffey, J. F. Duncan, T. Fitzpatrick, S. Gordon, T. Grimshaw, J. Harvey, A. H. Jacob, H. Kennedy, G. H. Kidd, J. Little, J. M'Donnell, R. M'Donnell, W. J. Martin, E. D. Mapother, A. H. Marks, William Moore, G. Morrogh, J. F. Pollock, Sir G. H. Porter, P. C. Smyly, W. Stokes, R. Tagart, J. Tufnell, J. H. Wharton. Trustees: J. F. Duncan, John M'Donnell, J. H. Wharton. Hon. Treasurer: W. Thomson. Hon. Secretaries: J. M. Finny and J. W. Moore. Hon. Secretary for India and the Colonies: Henry King. Acting Secretary: A. H. Benson.

THE LOWER THAMES VALLEY MAIN SEWERAGE BILL. By the new Bill, which dissolves the Lower Thames Valley Main Sewerage Board and constitutes a new united district for the disposal of the sewage of the Lower Thames Valley Main Sewerage District, it is proposed that the district of the Joint Board shall be subdivided, so that Richmond and the parishes constituting the Richmond Rural Sanitary Authority (Richmond Union, Barnes, Kew, Mortlake, and Petersham) shall be combined as one district; that Kingston-Surbiton District and the district of New Malden shall be constituted as another authority under the name of the Kingston District; and that the Local Government Districts of East Molesey, Hampton Wick, Ham-common, and Teddington, and the Kingston Union, shall be formed into a third district. Power is given to each of the newly constituted authorities to make due provision for the disposal of the sewage of its district, failure to make such provision within two years from the passing of the Act to render the authority liable to be declared in default.

# Medical Appointments.

*Intimations for this column must be sent* DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning at the latest.*

PANHAM, HENRY FRENCH, M.A., M.D.Cantab., L.S.A.Lond., has been appointed Senior Physician to the Royal Berkshire Hospital, vice Wells, deceased.

BLUMER, F. MILNES, B.A.Dunelm, M.B., C.M.Ed., has been appointed House-Surgeon to the Staffordshire General Infirmary, vice William Edward Rawson, M.R.C.S., resigned.

BURRIDGE, JOHN WALTER, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Medical Officer for the Eastham District of the Wirral Union, vice Wykes.

CAREY, DENIS JOSEPH, L.R.C.P.Ed., M.R.C.S., has been appointed Government Medical Officer and Public Vaccinator for the District of Port Stephens, New South Wales.

CHISHOLM, JOHN MERRITT, M.D., C.M.Ed., M.R.C.S., has been appointed Medical Officer for the Woolton District of the Prescot Union, vice Wood.

COLLINS, JOHN SHEILL, M.D.Q.U.I., M.R.C.S., has been appointed Assistant House-Surgeon to the Hull Royal Infirmary, vice H. C. Chambers, L.R.C.P., M.R.C.S., resigned.

DAVIS, HENRY, M.R.C.S., L.S.A.Lond., has been appointed Second Chloroformist to the Middlesex Hospital.

EMBREY, Mr. GEORGE, has been appointed Public Analyst for the County of Gloucester.

HARRISON, J. W., M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Sandwich and Ash Districts, vice Horne.

HOUSEMAN, JAMES GILPIN, M.B., has been appointed Honorary Physician to the Newcastle-on-Tyne Sick Children's Hospital, vice David Drummond, M.D., resigned.

JACK, ROBERT NILSON, L.R.C.P.Ed., L.R.C.S.Ed., has been appointed Health Officer for Stawell, Victoria.

KERR, ELIAS WM., M.B., M.Ch.T.C.D., has been appointed Medical Officer for the Eastern District and the Workhouse of the Cerne Union, vice McEnery.

LACEY, THOMAS SAMUEL, L.R.C.S.I. & L.M., L.R.C.P.Ed., has been appointed Medical Officer for the Royton and Thornham District of the Oldham Union.

MACDONALD, HUGH, M.D., M.Ch.Glas., has been appointed Government Health Officer and Surgeon to the Gaol, Lyttleton, New Zealand.

MORRISON, W., M.A., M.D. & C.M.Glas., has been appointed Resident Surgeon to Ballarat District Hospital, Victoria, Australia.

SMITH, HENRY STRODE, M.R.C.S., L.S.A.Lond., has been appointed Medical Officer for the Eighth District of the Axbridge Union, vice Tarleton.

WATSON, THOMAS ALFRED, M.B., C.M.Ed., has been appointed Assistant House-Surgeon to the South Dispensary, Liverpool.

# Births, Marriages, and Deaths.

## BIRTHS.

BARBER.—On the 4th inst., at Clapham, S.W., the wife of H. Vaughan Barber, M.A., L.R.C.P.Lond., of Stuart-road, High Wycombe, of a daughter.

BOTT.—On the 3rd inst., at Brentford, the wife of Henry Bott, L.R.C.P., of a son.

BROWN.—On the 1st inst., at Ainslie-place, Edinburgh, the wife of J. Graham Brown, M.D., F.R.C.P.E., of a son.

CANE.—On the 3rd inst., at The Mansion House, Peterborough, the wife of Leonard Cane, M.D., B.S., of a son.

CHIPPERFIELD.—On the 6th inst., at Bloxham, Oxon., the wife of T. J. B. Pearse Chipperfield, L.R.C.P., M.R.C.S. (prematurely), of twin sons.

CREED.—On the 31st ult., at Rathkeale House, Girdler's-road, West Kensington-park, the wife of Charles Philip Creed, M.R.C.S., L.R.C.P.Ed., of a son.

DOUGLAS.—On the 30th ult., at New-walk, Leicester, the wife of Claude Douglas, M.R.C.S., of a daughter.

FRASER.—On the 4th inst., at Western Lodge, Romford, Essex, the wife of James Alexander Fraser, M.R.C.S., L.R.C.P., of a daughter.

LORD.—On the 1st inst., at Wilton House, Landport-terrace, Southsea, the wife of Frederick Lord, L.R.C.P., L.R.C.S.Ed., of a daughter.

ROSS.—On the 3rd inst., at Macquarie-street, Sydney, New South Wales, the wife of E. Fairfax Ross, M.D., of a son.

SANKEY.—On the 1st inst., at Boreatton-park, Salop, the wife of Arthur O. Sankey, of a son.

## MARRIAGES.

DOWN—JONES.—On the 4th inst., at St. John's, Chelsea, Hubert Vincent, second son of George Down, M.D., of Holmhurst, St. John's-hill, S.W., late of South Kensington and Montague-place, W.C., to Margaret, only daughter of the late Benjamin Jones, Esq., of Britannia-road, Fulham.

EVANS—WRIGHT.—On the 3rd inst., at S. Mary's, Lower Merton, Surrey, by the Rev. J. C. Erck, Frederick William, M.D., M.R.C.S., &c., eldest surviving son of the late Alderman Thomas Evans, of Cardiff, Surgeon, to Henrietta Clarissa, youngest daughter of the late Richard Wright, Esq.

PHILLIPS—GOETZ.—On the 3rd inst., at All Saints', Margaret-street, John Phillips, B.A., M.D. (Cantab.), M.R.C.P., of Harley-street, eldest son of the late L. Phillips, of Birchmoor, near Bedford, to Jessie, eldest daughter of the late E. L. Goetz, of Gloucester-gardens, Hyde-park.

STABLES—DRURY.—On the 2nd inst., at Rathgar, Dublin, Walter Williams Godfrey Stables, M.R.C.S., of Heckington, Lincolnshire, eldest son of the late Walter Williams Stables, of Crosland Hall, Huddersfield, Jun., Esq., to Isabella Mary, youngest daughter of the late Thomas Drury, of Dartry, Upper Rathmines, County Dublin, J.P.

WALKER—LESTER.—On the 9th inst., at St. Matthias, Earl's-court, S.W., by the Rev. Henry Westall, of St. Cuthbert's, South Kensington, Charles Edward Walker, M.B., M.R.C.S., of Hurworth-on-Tees, Darlington, second son of W. H. Walker, M.D., Aldbro', Darlington, to Annette Curtis, youngest daughter of the late Rev. J. W. Lester, D.D., Vicar of Lower Norwood, Surrey. No cards.

## DEATHS.

FISHER.—On the 7th inst., suddenly, at Haselly Manor, near Warwick, Thomas Fisher, M.D., of Stone House, near Wigan, aged 81.

LING.—On the 1st inst., at The Beeches, Saxmundham, Suffolk, John Mitford Ling, M.R.C.S., L.S.A.Lond., aged 75.

LIVINGSTON.—On the 10th inst., suddenly, at his residence, High Barnet, John Livingston, M.D., aged 45.

STUART.—On the 1st ult., at Fraserburg, Cape of Good Hope, of typhoid fever, Donald Stuart, M.B., C.M.Aberd., late of Kenmay, Aberdeenshire, N.B., aged 31 years and 11 months. Deeply regretted.

***N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.***

## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Stewart's Instruments.)*

THE LANCET OFFICE, June 11th, 1885.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Dry Bulb. | Wet Bulb. | Solar Radia in Vacuo. | Max. Temp. Shade. | Min. Temp | Rain fall. | Remarks at 8.30 A.M. |
|---|---|---|---|---|---|---|---|---|---|
| June 5 | 29·82 | S.W. | 75 | 65 | 123 | 83 | 65 | ... | Hazy |
| ,, 6 | 30·00 | W. | 60 | 60 | 109 | 73 | 59 | ·29 | Raining |
| ,, 7 | 29·82 | S.W. | 62 | 59 | 121 | 75 | 58 | ·24 | Cloudy |
| ,, 8 | 29·73 | N.E. | 60 | 60 | ... | 63 | 69 | ·17 | Raining |
| ,, 9 | 29·97 | N. | 52 | 52 | 85 | 63 | 52 | ·74 | Raining |
| ,, 10 | 30·35 | E. | 56 | 51 | 105 | 64 | 51 | ·03 | Cloudy |
| ,, 11 | 30·39 | E. | 54 | 47 | 98 | 64 | 45 | ... | Bright |

# Medical Diary for the ensuing Week.

### Monday, June 15.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS.—Operations, 10.30 A.M., and each day at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1.30 P.M., and each day at the same hour.

ST. MARK'S HOSPITAL.—Operations, 2 P.M., and on Tuesdays at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M., and on Thursday at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. A. E. Schafer: Secretion.

### Tuesday, June 16.

GUY'S HOSPITAL.—Operations, 1.30 P.M., and on Friday at the same hour. Ophthalmic Operations on Mondays at 1.30 and Thursdays at 2 P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 4 P.M.; Friday, 2 P.M.

CANCER HOSPITAL, BROMPTON.—Operations, 2.30 P.M.; Saturday, 2.30 P.M.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M., and on Friday at the same hour.

### Wednesday, June 17.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.—Ophthalmic Operations on Tuesdays and Thursdays at 1.30 P.M.

ST. MARY'S HOSPITAL.—Operations, 1.30 P.M. Skin Department: 9.30 A.M., on Tuesdays and Fridays.

ST. THOMAS'S HOSPITAL.—Operations, 1.30 P.M., and on Saturday at the same hour.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN CENTRAL HOSPITAL.—Operations, 2 P.M.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN.—Operations, 2.30 P.M.

UNIVERSITY COLLEGE HOSPITAL.—Operations, 2 P.M.; Saturday, 2 P.M. Skin Department: 1.45 P.M.; Saturday, 9.15 A.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 3 to 4 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. A. E. Schafer: Secretion.

ROYAL METEOROLOGICAL SOCIETY.—7 P.M. Dr. William Marcet: Meteorological Observations made on a Trip up the Nile, February and March, 1885.—Dr. H. H. Hildebrandsson: The Mean Direction of Cirrus Clouds over Europe.—Dr. A. Woeikoff: On the Influence of Accumulations of Snow on Climate.—Mr. Charles Harding: Note on the Weather of January, 1881.—Lieut. Alexander Leeper: Results of Meteorological Observations made in the Solomon Group, 1882-84.—Mr. David Cunningham: Graphic Hygrometrical Table.

### Thursday, June 18.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—Surgical Consultations, 1.30 P.M.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2.30 P.M.

### Friday, June 19.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1.30 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

KING'S COLLEGE HOSPITAL.—Operations, 2 P.M.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—4 P.M. Mr. A. E. Schafer: Secretion.

### Saturday, June 20.

KING'S COLLEGE HOSPITAL.—Operations, 1 P.M.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

MIDDLESEX HOSPITAL.—Operations, 2 P.M.

# Notes, Short Comments, & Answers to Correspondents.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.*

*All communications relating to the editorial business of the journal must be addressed "To the Editor."*

*Lectures, original articles, and reports should be written on one side only of the paper.*

*Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.*

*We cannot prescribe, or recommend practitioners.*

*Local papers containing reports or news-paragraphs should be marked.*

*Letters relating to the publication, sale, and advertising departments of* THE LANCET *to be addressed "To the Publisher."*

### A DUTCH ACCOUNT OF HOTTENTOT PATHOLOGY.

A DUTCH practitioner who has lived for twenty years in South Africa sends to an Amsterdam medical journal some particulars of native customs and beliefs. The uterus is supposed to have a great tendency after parturition to fly upwards, and consequently after the second stage of labour the funis is carefully tied to one of the woman's great toes, so as to prevent the placenta from slipping away, and as soon as the third stage is completed she is tightly bound with a cloth or a cord at the level of the umbilicus, for if not the restless uterus would ascend into the breast. After the birth of a stillborn child nothing can prevent the womb from betaking itself into different regions and then performing unpleasant and painful gyrations. The writer mentions an old native woman who came to him with a scirrhus of the mamma. She complained of occasional pain in the abdomen, but was not seriously concerned about it, for, said she, "I know what that is; it is the womb going round; have I not had a stillborn child? From that time there can be no rest for the womb; he [the womb] keeps springing round and round, not always, but at times, perhaps for three months, and then for a fortnight he is still. Sometimes he sits here [indicating the spleen]; sometimes here [touching the right breast]; sometimes he sits behind my shoulder-bone, and then he burns like a coal of fire." The uterus has to answer in the native mind for most of the ills to which female flesh is heir; has she a colic, sickness, or any abdominal trouble, it is always the old story—"the womb is going round." When listening to a gesticulating patient describing her malady and enunciating her diagnosis of the cause, it is frequently somewhat difficult for a medical man to keep his countenance. It is utterly useless for him to attempt to reason with the woman or explain to her the absurdity of the position she has taken up. She will only doubt his skill, and scornfully reply: "Doctor must not say it is not so, for I know that it is." Amongst the natives the new-born babe is treated to a purifying draught of the father's freshly passed urine. The whites, some of whom are nearly as ignorant and superstitious as the natives, employ a quack "wonder-essence" as a substitute.

*Surgeon, V.A.*—1. The regulations for the reserve forces provide for only two grades of medical officers of volunteers—acting surgeon and surgeon. If our correspondent has completed twelve years' service as surgeon, he might apply to the Secretary of State for War, through his commanding officer, for promotion to the rank of surgeon-major, as it is granted to militia surgeons.—2. The relative rank of acting surgeon of volunteers is lieutenant, and that of surgeon is captain.

*E. E.* (P——th) is referred to a general notice at the head of this column.

### CARE OF EPILEPTICS.

*To the Editor of* THE LANCET.

SIR,—The parents of a lad subject to epileptic fits followed by uncontrollable outbursts of temper are most anxious to get him admitted into some institution where he will be well cared for and medically treated, as he is getting beyond their control. Some of your numerous correspondents would confer a favour by affording such information as will secure the object desired. I am, Sir, yours faithfully.

June 8th, 1885. M. G. E.

### DIPHTHERIA.

*To the Editor of* THE LANCET.

SIR,—May I ask through the medium of your columns for particulars of the latest and most successful treatment for diphtheria. Perhaps some brother practitioner will be able to suggest a line of treatment more satisfactory in its results than any known to Yours truly,

June 8th, 1885. L.S.A.

### MEDICAL MISSION WORK IN CHINA.

FROM the report for 1884 of the Hang Chow Medical Mission in connexion with the Church Missionary Society, it appears that the total number of out-patients attended during the year was 2020, and of in-patients 235, patients visited at their homes bringing up the total of those who were relieved by the mission to 4707. Anæmia, as in the case of the Chin-Chew Hospital, the work of which was noticed in a recent issue, formed a large percentage of the cases coming under treatment. It is especially common amongst women, and is easily accounted for by the following causes: marrying too young, hæmorrhagic losses during confinement, suckling their children for three and four years, and their cramped feet, which prevent them taking proper and sufficient exercise. Diseases of the skin and digestive system and malarious fever also each contribute a large percentage of patients. A new hospital, comprising a refuge for opium smokers, which was its *raison d'être* when commenced some thirteen months ago, and a medical school are almost completed, and will, it is expected, be opened in a few months.

*Dr. Whitteggs.*—The statement is corrected in another column.

*Mr. S. Jahn.*—The Preliminary is indispensable.

*Mr. G. E. Walker.*—Next week.

### THE RISK OF SMALL-POX.

*To the Editor of* THE LANCET.

SIR,—The following two cases of small-pox have been selected from nearly fifty which occurred during an epidemic about thirty-five years ago in a parish in Essex comprising a population of about 1500.

Two cases presented themselves simultaneously in opposite parts of the parish. Having obtained authority from the Board of Guardians for a general revaccination, I lost as little time as possible in commencing my defensive operations. I began, of course, with the families connected with the patients; but, as in those days no lymph-bearing calves were in existence, and the Privy Council had not come forward as protectionists, some considerable time elapsed before obtaining a sufficient supply of lymph, which was then supplied either on points or glasses. That delay gave the enemy a considerable advantage, hence the large number of cases. In the course of about two months I had operated on more than 1000 persons, not a single one of whom was subsequently attacked by the disease, although I had no means whatever for isolation.

1. Thomas H—— occupied a cottage which formed part of a "row" in which occurred a case of confluent small-pox of a malignant character. I at once vaccinated and revaccinated every person in the row except T. H——, who could be neither persuaded nor compelled to submit to the operation, in which he "had no faith." I did, however, insist upon vaccinating every other member of the family, which was a large one. His neighbour died, and he, by way of daring, assisted at the funeral. Within ten days he required the like service from others, and he was the only one in the row attacked.

2. John H—— lived in a hamlet in which several cases occurred, about two miles from my residence. I at once put them under a state of siege by vaccinating every person except J. H——, whose avocation as an ash-gatherer took him much from home. I met him, however, several times, and he always declared his intention of "coming to be cut." Unfortunately for him and myself, he never did come. He, too, had a very severe attack. Early in the morning of the third day, whilst his wife was dozing after her night's vigil, he escaped in his nightshirt and ran to the village, two miles distant. The ground was covered with snow. When summoned I found him crouching in the corner of a coal-hole which he had been in the habit of emptying, shaking with cold and fear, and declaring that the bleeding was caused by people shooting at him. I procured for him some hot brandy-and-water, whilst a tumbril was being prepared with straw and blankets, in which I sent him home, having first provided a strait jacket, which I had shown a man in attendance how to apply when the patient had been placed in bed. Late that evening I was again summoned to the hamlet, as the patient had "broken loose." On my arrival I found two men holding him down. Discovering that the jacket had not been properly applied, I reversed it, and, having secured him to the bedstead, left him in the charge of the two men. After a month or so he was convalescent, and is now alive. His face is deeply pitted, but in no other respect is he the worse.

Now, when it is considered that all the above number of cases had been nursed by the wives or mothers, who had uninterrupted intercourse with their respective families; that they occupied cottages with no more than two bedrooms; and that after the first three weeks of the outbreak in no single instance did more than one case exist in a house—when all these circumstances are considered, I do affirm that should any person still doubt that vaccination is a sure and certain protection against small-pox, such person is entitled to no sympathy should he ever suffer the penalty which his blindness or obstinacy is sooner or later likely to inflict upon him.—Your obedient servant,

London, May 12th, 1885. WILLIAM B. OWEN.

### A PLAGUE OF FLIES.

*To the Editor of* THE LANCET.

SIR,—Can any of your readers suggest the best method of ridding a house of flies? At the house I live in they are a regular pest, swarming in thousands. I am, Sir, yours faithfully.

June 11th 1885. VEXATION.

### SMOKING IN ASTHMA.

IN Henry Taylor's autobiography (Longmans, 1885, vol. ii., p. 153) occurs the following passage:—"The spasmodic form of disease has never returned. The cigarette which brought it to such a sudden end was made of a mild tobacco in paper slightly impregnated with saltpetre; not so manufactured with any medicinal view, but merely to make it burn better. It happened to be at hand when I was advised to try smoking tobacco; and it was this particular combination which saved me, for neither saltpetre nor tobacco pure and simple, or in other proportions, was of much use."

*Mr. J. C. Richardson.*—There can be no doubt that a medical man called to assist a midwife is entitled to a fee independent of the midwife's fee.

### DOES COCAINE AFFECT DEEP-SEATED PARTS?

*To the Editor of* THE LANCET.

SIR,—In reply to **Mr. Jackman's** queries in your last issue I think that if a solution of cocaine of sufficient strength be applied for a long enough time, it will be found that the sensibility of the iris is reduced to zero. As I pointed out in a former communication, when solutions of atropine, eserine, or cocaine are applied to the surface of the conjunctiva, they percolate through the cornea, and come into actual contact with the iris, and the extent of their influence upon that membrane depends upon the strength of the solution, the frequency of the instillation, and the time that has been allowed to elapse from the date of the first application; thus the aqueous humour of a cocainised eye will produce anæsthesia of its fellow if applied to it. In one case in which I tried this experiment I was surprised to find the pupil contract under the influence of aqueous humour, which, so far as I knew, contained only a mydriatic—a circumstance that was explained by the fact, subsequently ascertained, that the patient had been using a solution of eserine prescribed elsewhere. There is undoubtedly a considerable difference in patients; in fact, I had one who behaved exactly in the manner described by your correspondent; but my experience after forty-one extractions for cataract under cocaine, and numerous other operations, is that the effect, on the whole, even so far as the iris is concerned, is very satisfactory. I questioned a patient on this point on whom I performed iridectomy. I said, "Did you feel any pain?" His reply was, "Well, not to say pain." "Did you feel anything?" "Well, I felt you were doing something, but the eye was numb." In very nervous patients it is well to apply the solution after section of the cornea, and to wait a few minutes before excising the iris; this brings the anæsthetic as thoroughly into contact with the iris as with the cornea, and there can be no doubt as to the result; or the iris may be excised with the knife in passing it across the chamber, a method I frequently practised before the introduction of cocaine when operating for cataract, as I constantly did without any general anæsthetic. I did not, however, find it necessary to do this, or to apply the cocaine after incising the cornea, when I operated upon Mr. Copeland. The solution employed in that case was one of 8 per cent., instilled every five minutes for half an hour.

I am, Sir, your obedient servant,

CHARLES BELL TAYLOR, M.D., F.R.C.S.,
Surgeon to the Nottingham and Midland Eye Infirmary.

June 8th, 1885.

*R. D. H.*—There would seem to be no course open to our correspondent but to put pressure on the Local Government Board.

*Mr. H. W. Freeman's* paper is marked for insertion.

*Mr. L. Wise.*—We do not prescribe.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Bristowe, London; Professor Buchanan, Glasgow; Mr. F. A. Gray, Ottery St. Mary; Mdme. de Bunsen, London; Dr. Buck, Leicester; Mr. T. W. Nunn, London; Mr. R. B. Rawlings, London; Dr. Vallance, Stratford; Mr. Eyles, London; Mr. W. F. Phillips, Andover; Mr. Flint, Westgate; Mr. Hopkins, London; Mr. J. B. Pike, Loughboro'; Mr. J. Rankin, Sunderland; Mr. C. Roberts, London; Dr. Ward Cousins, Southsea; Messrs. Burroughs and Wellcome, London; Messrs. Pion, Nourrit et Cie, Paris; Dr. Niven, Manchester; Mr. McCaul, Trinidad; Dr. Latham, Cambridge; Messrs. Brand and Co., London; Mr. A. W. Dawson, Liverpool; Dr. Thos. Barr, Glasgow; Messrs. Benjamin and Son, London; Mr. G. P. Field, London; Dr. Whitelegge, Nottingham; Dr. Taylor, Scarborough; Mr. St. John Wright, London; Dr. P. Doyle, Christchurch, N.Z.; Mr. Harries, Aberystwith; Mr. Lawson Tait, Birmingham; Dr. Wilks, London; Mr. Lawday, Everton; Dr. C. Bell Taylor, Nottingham; Dr. De Havilland Hall, London; Dr. Greig Smith, Clifton; Mr. McKinney, Nunhead; Mr. Austin, London; Dr. Oliver, Harrogate; Dr. Horrocks, London; Dr. Norman Kerr, London; Mr. R. T. Collins, London; Messrs. Leader and Sons, Sheffield; Mr. Simons, Dumfries; Mr. Biggs, Wakefield; Mr. Bowater, London; Mr. Darke; Mr. Billingdale, Notts; Messrs. Mackay, Edinburgh; Mr. Jones, Sheffield; Miss Stables; Messrs. Oppenheimer and Co., London; Mr. Maw, Bradford; Mr. Oliver, Manchester; Mr. Gant, Hastings; Dr. Campeaux, Paris; Messrs. Dawson Bros., Montreal; Mr. Ral, Ipswich; Mr. Grant, Birmingham; Mr. Wilson, Salisbury; Mr. Alexander, Spa; Messrs. Iliss, Fairford; Mr. Wood, Hammersmith; Dr. B. Squire, London; Messrs. Smith, Elder, and Co., London; Dr. Diver, Kenley; Dr. Savill, London; Dr. Parsell, London; Mr. Watson, Glasgow; Mr. Tumner, Harrogate; Mr. G. F. Butt, Ingleside; Mr. Williams, Manchester; Mr. H. W. Freeman, Bath; Dr. McCarthy, London; Mr. Callender, London; Dr. Royle, Jersey; Mr. Elkerton, London; Dr. McLeod, Edinburgh; Mr. R. H. Reeves, Westbury Leigh; Dr. J. C. Thorowgood, London; Mr. M. Leslie, London; Dr. Cobbold, London; Mr. Alban Doran, London; Dr. Pearson, London; Mr. Brown, Westgate-on-Sea; Messrs. Allen and Hanbury, London; Messrs. Squire and Son, London; Mr. Teague, Manchester; Mr. Bracher, Mere; Mrs. Pratt, Cardiff; Mr. Russell, London; Messrs. Everett and Co., London; Dr. Gledhill, Manchester; Mr. Peel, London; Mr. Storey, Leicester; Mr. Elliott, Carlisle; Mr. Hodgson, London; Col. Radcliffe, Leamington; Mr. Hunt, Hull; Messrs. Boake and Co., Stratford; Mr. Jenkinson, Sheffield; Mr. Briscoe, Brompton; Miss Going; Messrs. Cupples, and Co., Boston, N.Y.; Miss Bunson, London; Mrs. Ling, Sanmundham; Miss Oliver; Dr. Braxton Hicks, London; Mr. Vose Solomon, Birmingham; M. G. E.; L.S.A.; The Secretary, Stafford; G.; X. Y. Z.; S. J. W., Brighton; R. D. H.

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*Burton Chronicle, Church of England Temperance Chronicle, Galloway Advertiser, Metropolitan, Sydney Morning Herald, Birmingham Daily Post, Liverpool Daily Post, Newbury Weekly News, Liverpool Echo, &c.*, have been received.


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